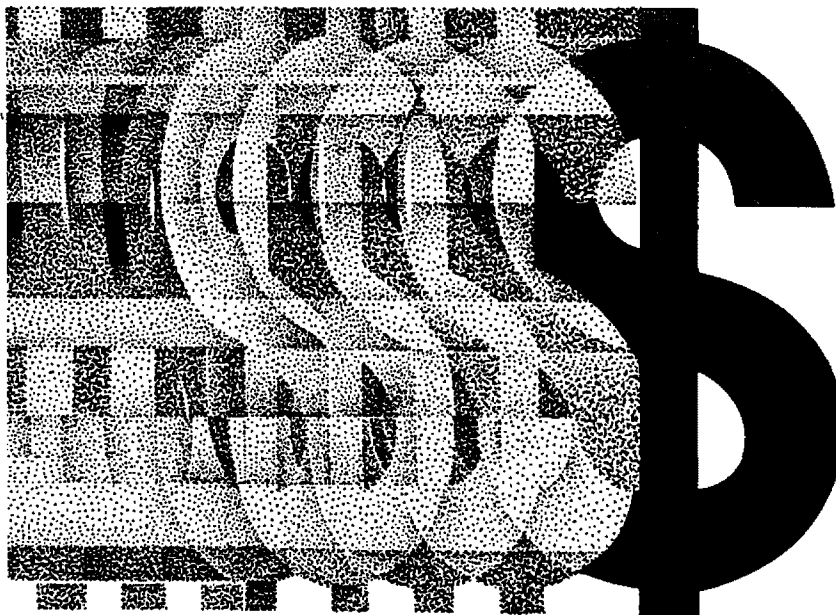
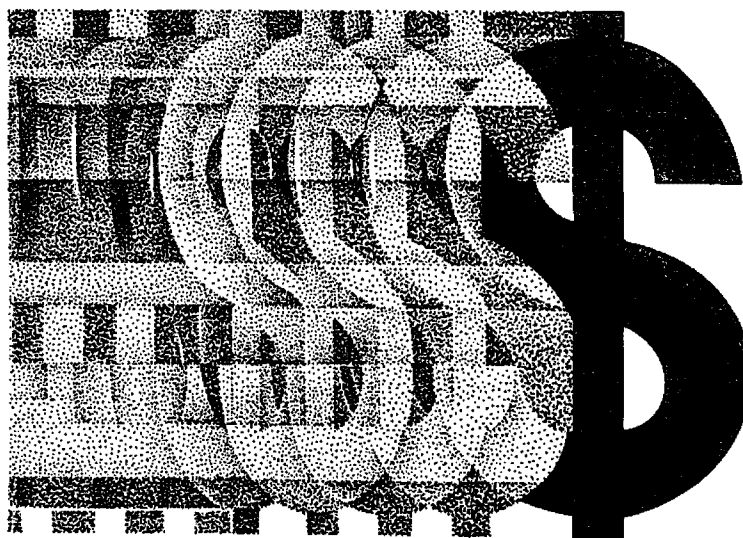
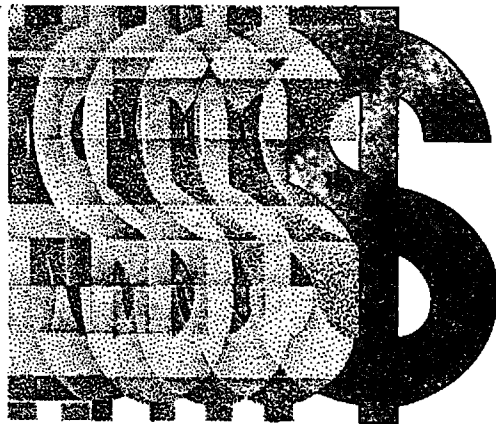




1988 Budget in Brief



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FOREWORD

This summary of the President's 1988 Budget for the U.S. Environmental Protection Agency presents major resource changes and related program priorities. It is organized into six sections.

Overview - The overview describes major goals and program directions. We have highlighted the key programmatic issues that are central to the President's 1988 Budget for EPA.

Operating Budget Summary - This section presents summaries of changes for each of the Agency's major programs.

Superfund - This section details program responsibilities, resources, and plans for the Superfund program.

Construction Grants - We explain the President's Budget for the municipal wastewater treatment facilities construction program in this section.

Research and Development - We highlight research activities in support of the Agency's regulatory programs in this section.

State and Local Grants - This section summarizes the President's proposal for State and local grants included in the operating programs.

An appendix to the document contains budget tables comparing the 1988 President's Budget with the current funding level for 1987.

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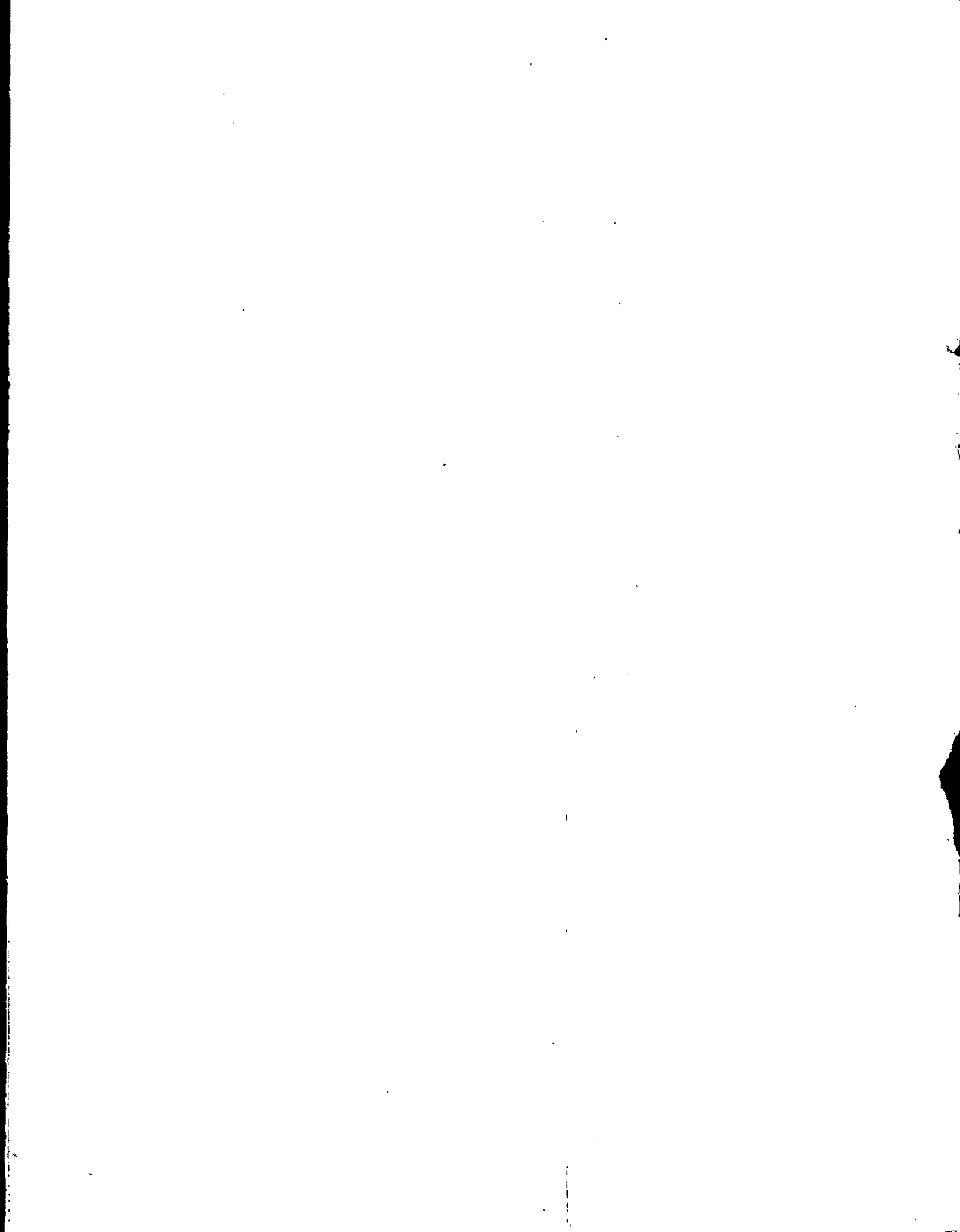


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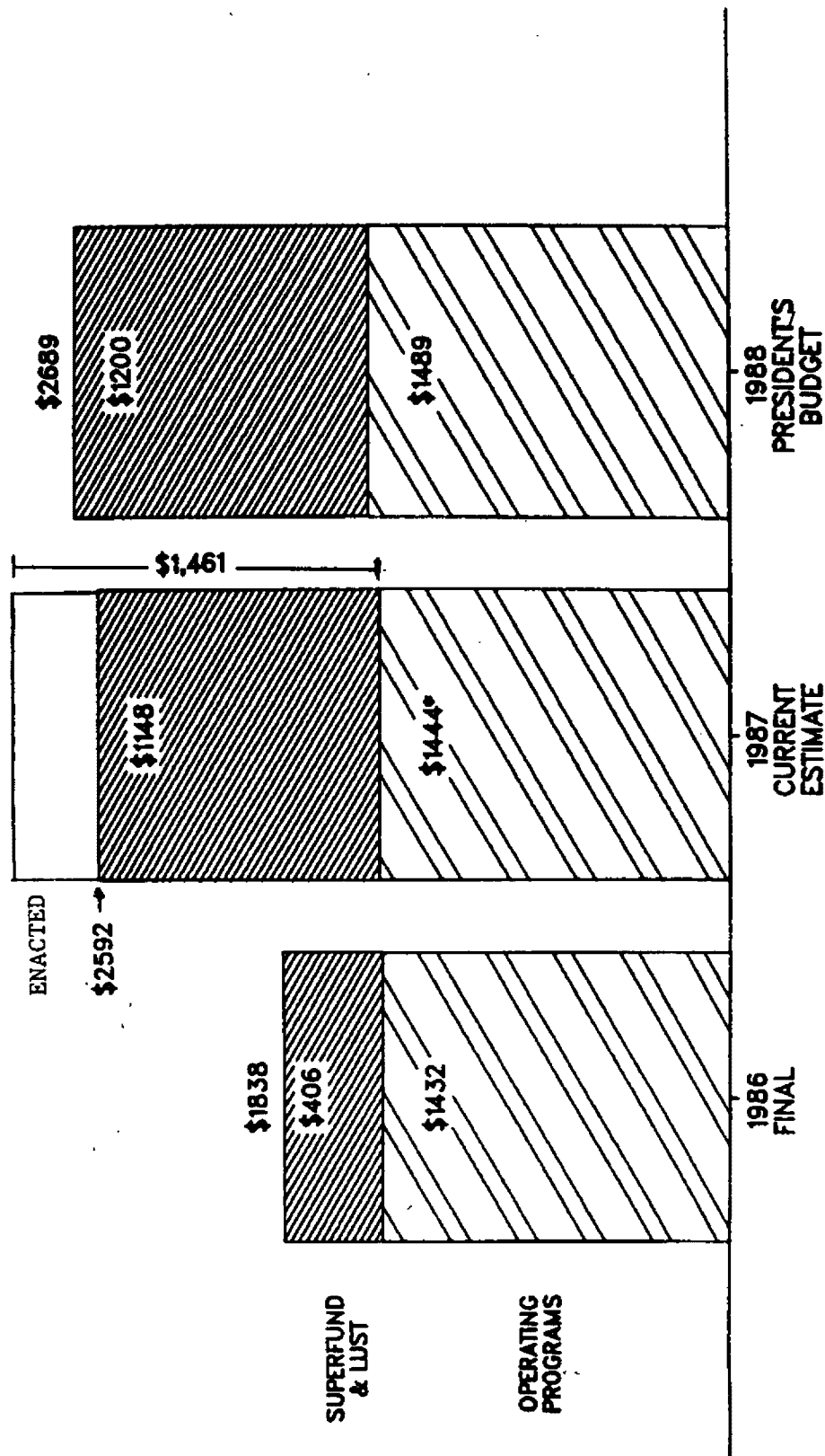
NOTE: The charts on the following pages include the 1986 Final Actuals, 1987 Current Estimate, and the 1988 President's Budget. Unless otherwise noted, all comparisons between 1988 and 1987 budget levels in the narrative refer to the 1987 Current Estimate and 1988 President's Budget. (The "Current Estimate" is the Agency's current plan for using its resources.)

Additionally, references to workyears refer to total workyears rather than only "permanent" workyears.

OVERVIEW

THE AGENCY'S FY1988 BUDGET INCREASES BY NEARLY \$100 MILLION FROM THE FY1987 CURRENT ESTIMATE

(\$ IN MILLIONS)



* Includes \$50 million rescission

OVERVIEW OF THE 1988 BUDGET

The President's 1988 Budget for the Environmental Protection Agency provides the Agency with the necessary resources to address the nation's most critical environmental problems. The challenges we face include managing hazardous waste, providing safe drinking water, ensuring clean air and water, and controlling toxic substances. This year's budget again reflects the Administration's strong commitment to the environment.

The 1988 Budget request provides strong support for implementing EPA's new requirements. It continues, for the second year, a major ramp-up of the reauthorized Superfund Program. It continues the Agency's emphasis on implementing the Safe Drinking Water Program, including a new State grant, and also incorporates the Administration's new legislative proposal for the Construction Grants Program. Finally, the budget supports implementation of the "Special Envoys' Report on Acid Rain."

At the same time, the 1988 request includes resources to ensure a stable base for the Agency's Operating Programs. It continues the expansion of the Agency's enforcement program and maintains the strong State-Federal partnership that is crucial to achieving our environmental goals.

The Agency's total request is almost \$2.7 billion supported by 14,323 workyears. The request includes \$1.5 billion and 11,522 workyears for our Operating Programs and \$1.2 billion and 2,801 workyears for Superfund and the new Leaking Underground Storage Tank (LUST) Programs. When we include previously appropriated funds, we expect to conduct a total Superfund/LUST Program in excess of \$1.6 billion. The total amount for Superfund for 1988 exceeds the entire amount of funding provided over the first 5 years of the program.

The following provides a brief summary of key programmatic components in the President's 1988 Budget:

Construction Grants

The Administration has developed a significant new legislative proposal for Construction Grants that would provide \$4.0 billion between 1987 and 1988. This proposal would provide \$12 billion over 8 years. As soon as legislation is enacted which incorporates this proposal, the President will submit an amended request for \$2 billion for 1988. Until that time, resources will continue to be provided to grantees with prior year funding.

Superfund

The long awaited reauthorization of Superfund, signed by President Reagan in October 1986, allows EPA to pursue an aggressive cleanup program for uncontrolled hazardous substance sites. The Agency's 1988 Plan calls for a \$1,579 million program, of which \$1,200 million is in new budget authority while the remainder is unused prior year funding. This budget is supported by 2,716 workyears. The new and expanded authorities provided by the "Superfund Amendments and Reauthorization Act of 1986" reinforce all major programmatic areas--emergency removals, remedial responses, enforcement, and research and development--and will result in more extensive and permanent cleanups.

Key resource investments in 1988 focus attention on completing cleanup at remedial sites started in earlier years, implementing the new cleanup standards, pursuing a large number of settlements with responsible parties, recovering costs of Federal cleanup actions, and implementing new requirements which will accelerate response actions at Federal facilities. These efforts will place more sites than ever into the design and construction phase, the final steps in the cleanup process.

Safe Drinking Water

The 1988 budget underscores the Administration's commitment to providing the nation with a clean, safe supply of drinking water. The "Safe Drinking Water Amendments of 1986" expand EPA's responsibilities in ensuring that the nation's drinking water supplies are free from contamination. The legislation requires that EPA regulate new contaminants and develop a program to monitor State and local government compliance with public water supply standards.

In order to carry out these activities, the FY 1988 budget provides 753 workyears and \$112.3 million for the Safe Drinking Water Program, including \$8 million for a new Wellhead Protection grant. With the increase in 1987, this program will grow by approximately 29 percent.

Research and Development

EPA's 1988 Research Program will continue to provide the necessary support for the development and implementation of regulations required by statute as well as to expand into areas where new environmental problems have been identified.

The Agency will also support the implementation of the Lewis/Davis "Special Envoys' Report on Acid Rain" by working closely with the Department of Energy in support of the clean coal technology demonstration program, maintaining an ongoing information exchange with Canada, and implementing research essential to resolving trans-boundary Acid Rain issues.

The 1988 President's Budget provides a total Research and Development program of \$354.3 million and 1,844 workyears, including Superfund and Leaking Underground Storage Tank research. The Superfund Research program will be significantly expanded in 1988 and will focus on evaluation of remedial technologies to improve site clean-up and provide additional health risk assessment support for clean-up and enforcement actions.

Research will also provide necessary information to implement the "Safe Drinking Water Amendments of 1986", and to improve our understanding of new and complex air pollution problems such as municipal waste incineration, indoor air pollution, and global warming.

State And Local Grants

The State-Federal partnership is crucial to improving the nation's environmental quality. Increasingly, a number of vital EPA programs are being delegated to the States for implementation. State and local grants form an integral part of the resource base used by the States to meet their environmental responsibilities.

The President's 1988 budget provides \$295.7 million to support these State and local environmental programs. This resource level represents an increase of nearly \$10 million over 1987.

Maintaining The Agency's Enforcement Effort

The 1988 budget provides increased resources for the Agency to continue its strong enforcement efforts. Resources for the enforcement program increase \$28 million to \$271 million, and 140 workyears to 3,407 workyears.

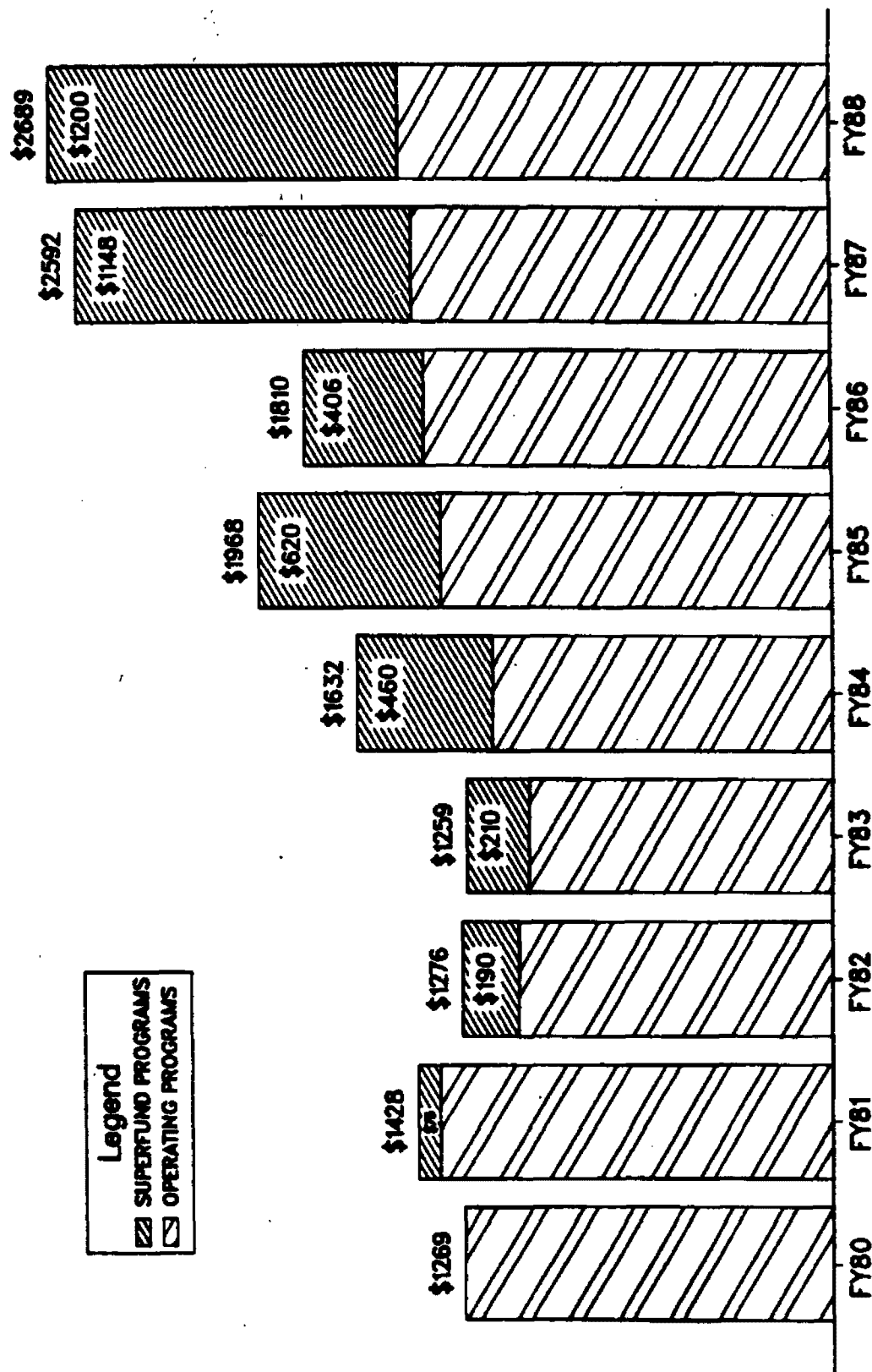
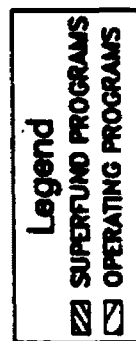
Most of the enforcement increases are provided for the reauthorized Superfund Program. The FY 1988 Budget provides increases of \$23.5 million (+24 percent) and 126 workyears (+15 percent) for Superfund enforcement activities. These resources will be used to promote settlements for site cleanup by responsible parties, to increase cost recovery efforts, and to ensure that Federal facilities meet the new statutory requirements.

In the operating program, resources increase for hazardous waste enforcement activities by 20 workyears and \$1.8 million over the 1987 level. Major emphasis will be placed on monitoring and enforcing corrective action remedies for hazardous waste facilities. The request will also continue to provide support for the new requirements of the Safe Drinking Water Act.

Enforcement resources are requested at a level which will allow the Agency to take timely and appropriate action against significant non-compliers. It will also ensure that we respond in a timely manner to our ongoing enforcement caseload.

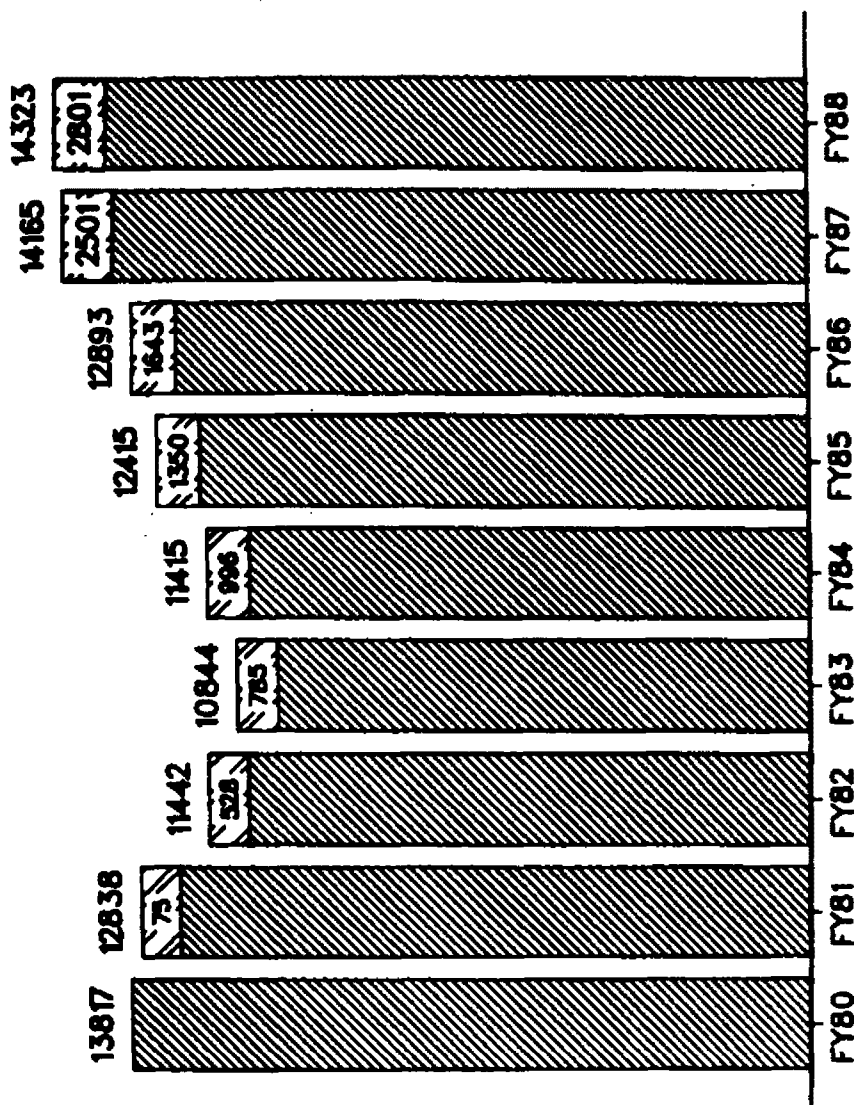
IN 1988, THE AGENCY'S BUDGET FOR SUPERFUND, LUST AND THE
OPERATING PROGRAMS WILL TOTAL ALMOST \$2.7 BILLION

(\$ IN MILLIONS)



THE AGENCY'S TOTAL WORKYEAR CEILING WILL INCREASE SLIGHTLY DURING FY 1988

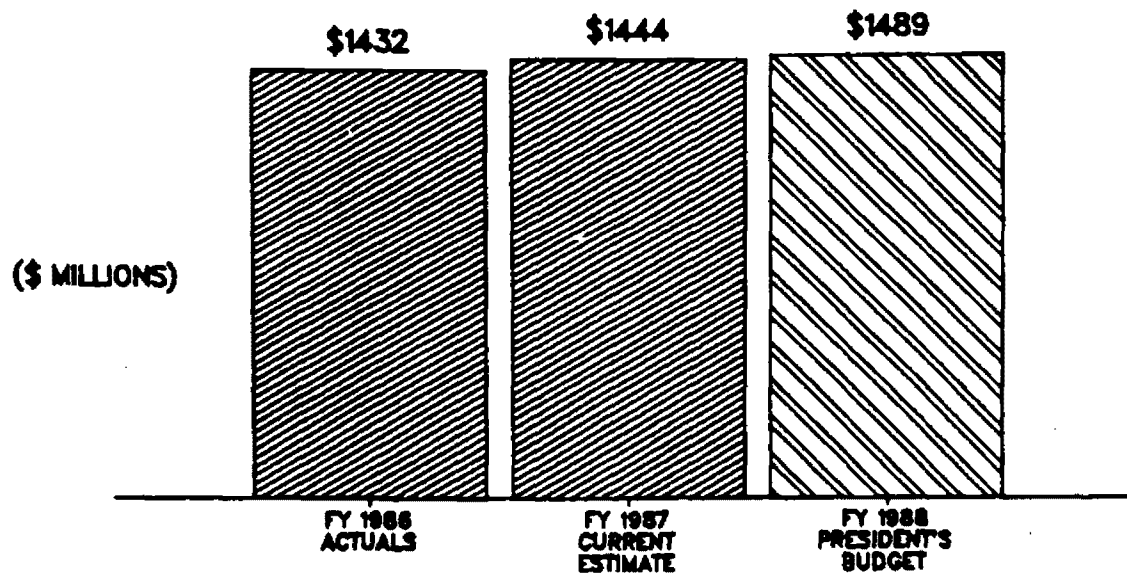
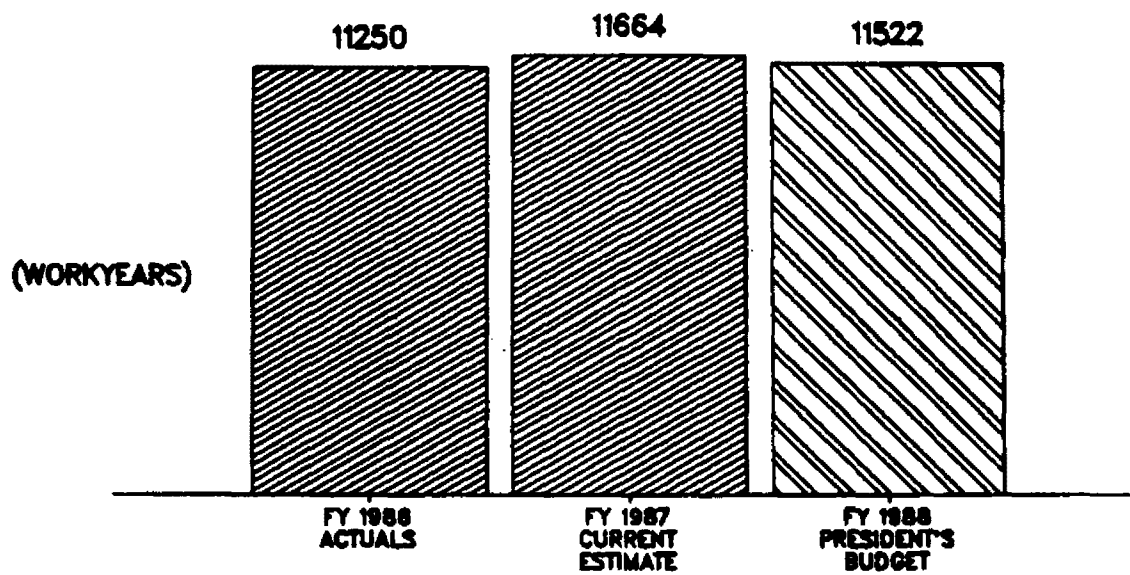
 SUPERFUND/ALIST PROGRAMS
 OPERATING PROGRAMS





OPERATING BUDGET SUMMARY

OPERATING PROGRAMS



OPERATING PROGRAMS OVERVIEW

EPA's 1988 budget includes \$1,489 million and 11,522 workyears for its Operating Programs. This represents a three percent increase in dollars and a one percent reduction in work-years over the 1987 current estimate. The following two tables present resources by program from 1987 to 1988, followed by a short description of each program.

ENVIRONMENTAL PROTECTION AGENCY
SUMMARY OF OPERATING PROGRAMS
BY MEDIA

(WORKYEARS)

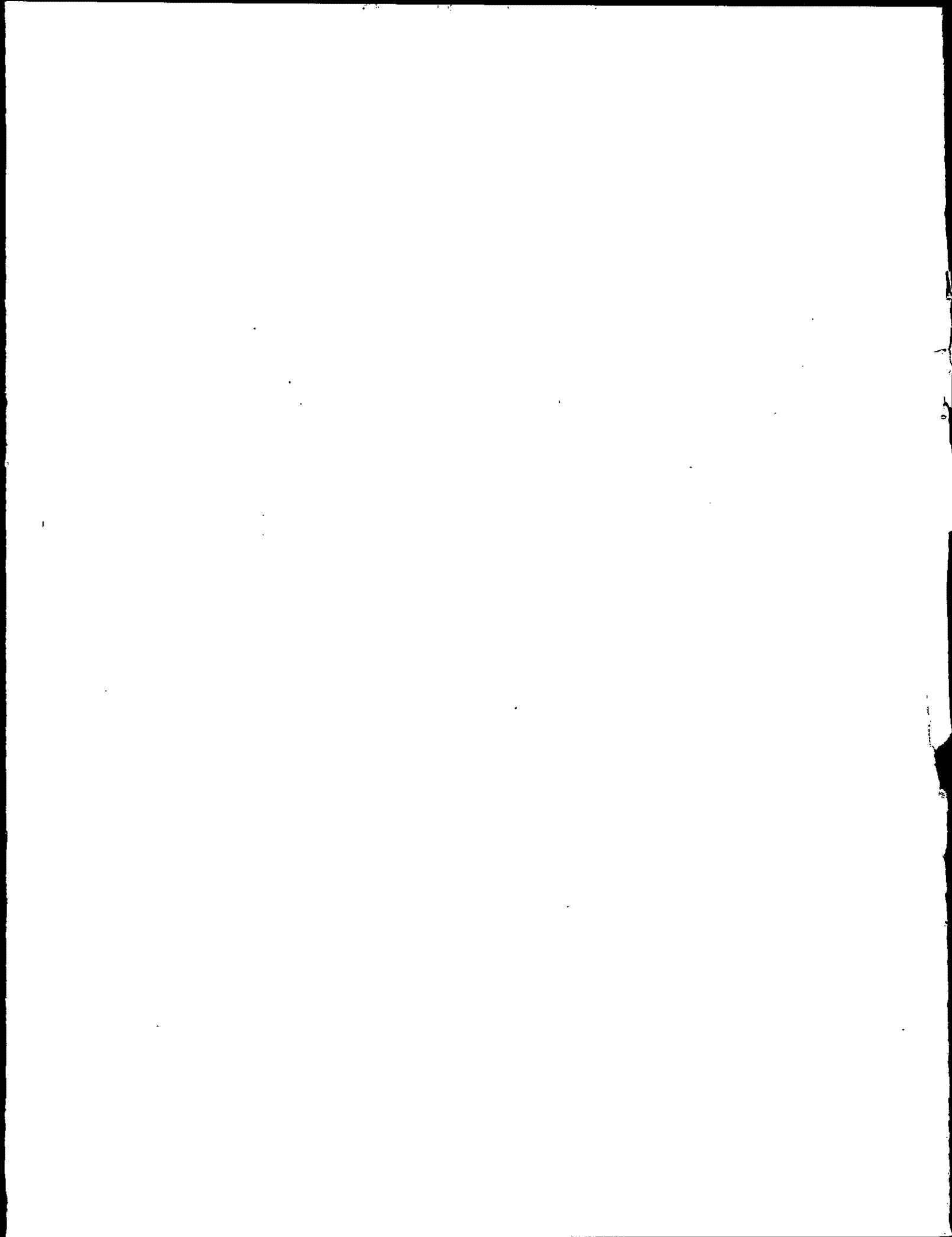
MEDIA	FY 1987 CURRENT ESTIMATE	FY 1988 PRESIDENT'S BUDGET	1988 - 1987
			DIFFERENCE TOTAL WORKYEARS
AIR	1,775.0	1,765.7	-9.3
WATER QUALITY	2,177.0	2,124.6	-52.4
DRINKING WATER	758.0	752.7	-5.3
HAZARDOUS WASTE	1,481.6	1,485.4	+3.8
PESTICIDES	812.7	818.2	+5.5
RADIATION	185.2	166.7	-18.5
INTERDISCIPLINARY	616.8	602.2	-14.6
TOXIC SUBSTANCES	856.1	839.6	-16.5
ENERGY	85.6	82.6	-3.0
MANAGEMENT & SUPPORT	2,853.7	2,822.0	-31.7
REIMBURSEMENTS	62.0	62.0	
 SUBTOTAL	 11,663.7	 11,521.7	 -142.0

ENVIRONMENTAL PROTECTION AGENCY
SUMMARY OF OPERATING PROGRAMS
BY MEDIA

(DOLLARS IN THOUSANDS)

MEDIA	FY 1987 CURRENT ESTIMATE	FY 1988 PRESIDENT'S BUDGET	1988 - 1987 DIFFERENCE TOTAL DOLLARS
AIR	\$244,289.1	\$241,047.7	-\$3,241.4
WATER QUALITY	238,855.6	229,442.9	-9,412.7
DRINKING WATER	105,570.9	112,311.0	+6,740.1
HAZARDOUS WASTE	258,132.8	249,375.0	-8,757.8
PESTICIDES	69,303.9	72,929.4	+3,625.5
RADIATION	15,388.9	13,428.0	-1,960.9
INTERDISCIPLINARY	56,883.1	54,608.5	-2,274.6
TOXIC SUBSTANCES	90,411.9	83,091.7	-7,320.2
ENERGY	59,547.4	58,866.6	-680.8
MANAGEMENT & SUPPORT	305,408.4	329,983.5	+24,575.1
 SUBTOTAL	 \$1,443,792.0	 \$1,445,084.3	 +\$1,292.3
 FERS/PAYRAISE*		44,000.0	+44,000.0
 TOTAL	 \$1,443,792.0	 \$1,489,084.3	 +\$1,292.3

* FEDERAL EMPLOYEE RETIREMENT SYSTEM (FERS) COSTS UNDISTRIBUTED BY MEDIA



AIR PROGRAM HIGHLIGHTS

The President's 1988 Budget provides 1,766 workyears and \$241.0 million for the air program, nearly the same resource level as 1987. The highlights of the 1988 Air program are as follows:

- o Air Quality Planning and Standards Program will Focus on Air Toxics Regulations: In 1988, EPA will utilize 250 total workyears and \$23.3 million to continue implementation of a comprehensive strategy for controlling toxic air pollutants as well as evaluating ways to address acid rain, stratospheric ozone depletion and indoor air pollution. This level represents a decrease from 1987 of 6 workyears and \$6.3 million due to the completion of the regulatory process to determine whether to regulate chlorofluorocarbons and completion of global climate change studies.
- o State Grants Support Air Toxics and Monitoring Networks: State and local grants under Section 105 of the Clean Air Act total \$95.0 million, the same level as 1987. In 1988, States will implement inspection and source compliance programs, continuing to emphasize sources in non-attainment areas. States will maintain the air monitoring system networks, replacing obsolete instruments and continuing necessary modifications to collect size specific particulate matter data. Implementation of the national air toxics strategy will continue to be a major priority for State and local air programs in 1988.
- o Regional Monitoring and Air Quality Management Emphasizes Emerging Programs: The Agency requests 451 workyears and \$20.6 million, which represents a decrease of 5 workyears and no change in dollars. Regional programs will continue to provide effective and timely policy guidance and technical consultation to States. Emphasis will be placed on

restoration of environmental quality, particularly within the remaining non-attainment areas; State Implementation Plans (SIP) revisions related to revised National Ambient Air Quality Standards (NAAQS); and air toxics.

o Mobile Sources Emphasizes Air Toxics and Ozone:

The 1988 request for mobile source air pollutant control and fuel economy totals 205 workyears and \$14.7 million, which represents about the same level as 1987. The standards program in 1988 will continue emphasis on controlling ozone precursors and air toxics, and the regulatory program will concentrate on control of evaporative and refueling emissions, excess hydrocarbon emissions, and particulate emissions. In addition, mobile sources is proposing to implement a user fee proposal for certification, imports, and corporate average fuel economy.

o Mobile Source and Stationary Source Enforcement Increases Slightly: The 1988 request for stationary and mobile source enforcement totals 423 workyears and \$22.0 million, representing an increase of \$.2 million. Initiatives in 1988 include implementation of the wood stoves New Source Performance Standards (NSPS) program and establishment of a heavy-duty vehicle recall program. The stationary program will continue to ensure that noncomplying significant sources are brought into compliance. The mobile source enforcement program will continue to assist States and local governments in adopting and implementing their own tampering and fuel switching enforcement programs.

o The Research and Development Program Will Focus on New, Complex Air Pollution Problems: New scientific evidence indicates that potentially serious environmental problems are resulting from stratospheric ozone depletion, emissions from municipal waste incineration, and indoor air pollution. In 1988, the air research program request totals \$65.5 million and 437 workyears, an increase of \$2.4 million and two workyears. Research in 1988 will emphasize identifying the sources of hazardous air pollutants indoors and from municipal incinerators and identifying the causes and effects of

stratospheric ozone depletion, the build-up of trace gases in the atmosphere, and the phenomenon of global warming in order to provide information to policy-makers on feasible regulatory and technological controls.

WATER QUALITY PROGRAM HIGHLIGHTS

The President's 1988 budget provides 2,125 work-years and \$229.4 million for water programs, a decrease of 52 workyears and \$9.4 million. These decreases are attributable primarily to decreased technical assistance in the highly delegated Construction Grants program and a reduced request for the Oil Spills program to reflect actual utilization. In addition, the Agency is not requesting funding for the Clean Lakes program. These decreases are offset by increases for near coastal waters and the wetlands initiatives.

The major themes which characterize the water program in 1988 include continued implementation of three separate compliance programs as well as a sound marine and estuarine protection program, controlling and analyzing the effects of toxic pollution, effectively managing the construction grants program, and research to support wetlands and near coastal waters initiatives.

- o Controlling Toxics at Publicly Owned Treatment Works: The emphasis of the pretreatment program in 1988 will be on enforcement against noncomplying POTWs that have been approved for three or more years, addressing specific episodes of pass-through or interference, and assisting or modifying local programs to address additional hazardous or toxic pollutants.

EPA will also continue to initiate enforcement actions against noncomplying industrial users in nondelegated States where there is no approved program.

- o Maintaining Progress in Issuing Water Permits: In 1988 priority will be given to water quality considerations, especially those associated with toxic or

hazardous pollutants beyond the 126 priority pollutants covered by Best Available Technology (BAT) requirements. Permits will be modified to incorporate biomonitoring studies, pretreatment revisions, and new technology requirements.

- o Addressing Critical Compliance Deadlines: Resources for water quality enforcement and permit issuance remain essentially stable in 1988. In order to continue the major ongoing effort to place all municipalities in compliance with the 1988 compliance deadline, EPA will maintain strong support for the National Municipal Policy. In 1988, EPA will focus on assuring that permittees placed on enforceable schedules comply with those schedules and will increase efforts to place minor permittees on enforceable compliance schedules.

- o Restoring Integrity of Near Coastal Waters: Programs for the restoration and preservation of the near coastal environment will take on increased emphasis in 1988. Support will be continued for Narragasset Bay, Long Island Sound, Pamlico/Albemarle Sounds, San Francisco Bay, and Puget Sound.

Several pilot projects will be initiated in selected coastal and marine areas to test innovative solutions for identified major environmental problems. The types of problems to be addressed include toxics in sediment and water, excessive nutrient loadings, and microbial concentrations in shellfish.

The Agency will continue to focus on Chesapeake Bay and other basins of major importance to the public and Congress to determine the appropriate actions that State and Federal authorities should take in these areas.

- o Effectively Managing the Construction Grants Program: The President will propose a revised plan to phase out the program by 1994 and will request \$2.0 billion in 1988 if the proposed plan is enacted. The plan will emphasize the need to target funds to the most environmentally significant projects and to develop financial self-sufficiency on the part of States.

EPA staff will continue to effectively manage funds already appropriated, focusing on State oversight to ensure cost effective construction, operation, and maintenance of facilities previously constructed or currently under construction. Assistance in implementing the National Municipal Policy will also be provided for facilities not in compliance with secondary treatment requirements.

- o Research To Support New Wetlands and Near Coastal Waters Initiatives: The water quality research program will continue to provide the scientific base to help States develop water quality standards and conduct use-attainability analyses and whole effluent toxicity testing. In 1988, the budget for water quality research totals \$24.7 million, an increase of \$0.3 million over 1987. Increased emphasis in 1988 will be placed on developing responsive and scientifically valid wetlands and near coastal waters research programs. The Great Lakes research program will be funded at the 1987 enacted level. In addition, research to evaluate innovative and alternative wastewater treatment technologies will continue.

DRINKING WATER HIGHLIGHTS

The Safe Drinking Water Act (SDWA) Amendments expand EPA's responsibility to ensure that the nation's drinking water supplies are free from contamination which may pose a risk to public health. The Amendments require the Agency to regulate 83 new contaminants by 1989, 49 of which are to be final by June of 1988. Additionally, a program must be developed for all public water systems requiring them to monitor for unregulated contaminants in a repetitive 5-year cycle and Federal enforcement actions against violators of Public Water System (PWS) and Underground Injection Control (UIC) program requirements must be implemented when States do not take appropriate actions.

The 1988 Budget will adequately cover the activities specified by the SDWA Amendments, including activities carried out through the Wellhead Protection Program (WHP).

The President's 1988 Budget provides 753 workyears and \$112.3 million for the Drinking Water Program, with a decrease of 5 workyears from 1987 and an increase of \$6.7 million. Overall, the program is 121 workyears and \$25.8 million above 1986 levels before enactment of the Amendments. The major areas in drinking water include the following.

- o Implement Wellhead Protection Program: In 1988, EPA will implement this new program by making grant awards to States that are undertaking adequate programs for protection of wellhead areas of all public water supplies within their boundaries. The program will maintain an ongoing effort to provide States and localities with the technical assistance necessary to develop plans and appropriate controls. A total of \$8.0 million is provided for initial grant awards in 1988.

- o Set New Drinking Water Standards: The 1988 Budget provides the same amount of workyears and funding as in 1987 for these activities. The program will continue establishing Maximum Contaminant Level Goals for new National Primary Drinking Water Regulations and establish regulations for disinfection, filtration, and treatment of water supplies. A list of priority contaminants will be published by January 1988. This list will set the agenda for subsequent drinking water regulations and start a timetable for promulgating a minimum of 25 new standards every three years. The Drinking Water and Pesticides programs will build on a pilot project for the Pesticides in Drinking Water Wells Survey and proceed with the survey in 1988.
- o Improve Public Water Supply Compliance: The program will maintain its high priority in improving compliance with existing PWS standards in primacy States and States in which EPA must assume direct implementation. All systems in violation will be at risk of State and Federal intervention, but "significant non-compliers" will receive first priority.
- o Continue Research and Development: The drinking water research program will provide the scientific data needed to support the implementation of the new SDWA Amendments. In 1988, the request will provide the scientific base to develop maximum contaminant levels and Health Advisories, evaluate control technologies for the removal of contaminants in drinking water, and provide analytical methods and procedures for chemical and microbiological analyses.
- o Maintain Enforcement of Underground Injection Control (UIC) Program: The program will continue enforcing compliance with regulatory requirements where States have no primacy enforcement responsibility or fail to act against violators in a timely and appropriate manner.

HAZARDOUS WASTE PROGRAM HIGHLIGHTS

The goal of EPA's Hazardous Waste program is to protect public health and the environment from unnecessary risks by developing and implementing sound hazardous waste management practices. 1988 is a significant year in this effort because several of the major milestones established by the Hazardous and Solid Waste Amendments of 1984 will be substantially achieved. These include the promulgation of major regulations and the issuance of permits for land disposal facilities. As these efforts reach completion, program priorities will shift to emerging enforcement and implementation issues. The Agency will continue to emphasize major ongoing rule-makings.

Highlights of the President's Budget for 1988 are as follows:

In 1988 the Hazardous Waste program is requesting 1,485 workyears and \$249.4 million. This represents an increase of 4 workyears and a decrease of \$8.8 million from EPA's 1987 budget for Hazardous Waste.

- o Major Regulations Will Be Promulgated: Given that the Agency will be completing several major regulations, resources for this area decrease by 13 workyears and \$7.4 million from 1987 levels of 274 workyears and \$67.0 million. The first set of regulations that ban the land disposal of untreated wastes will be in place, and standards for underground storage tanks will be promulgated. Work will continue on other land disposal restrictions and treatment standards, other major rulemakings, and implementing guidances.
- o The Agency Will Shift Resources To Emerging Enforcement Priorities and Implementation of New Standards: Enforcement resources increase by 20 workyears and \$1.8 million over the 1987 base of 472 workyears

and \$36.3 million. As regulations are completed, increased efforts will be targeted to their enforcement. Major emphasis will be placed on monitoring and enforcing corrective action remedies for contamination at hazardous waste facilities.

Implementation resources decrease by 19 workyears from 1987 levels of 402 workyears. The reduction reflects the issuance of permits during 1987, as well as the completion of much work in reviewing and processing other permit applications. These resource levels will enable EPA to continue work on other disposal, treatment, and storage permits; environmental problems at closing facilities; and implementing new regulations.

The Agency will provide significant support for the implementation and enforcement of underground storage tank standards, including oversight and technical assistance for State programs. Work-years for these activities will double from their 1987 level to 40.

- o Research Activities Will Emphasize Land Banning and Alternative Disposal Technologies. The Agency is requesting 234 workyears and \$45.2 million for research to support the Hazardous Waste program, a decrease of 4 workyears and \$5.3-million from the 1987 base due to the completion of dioxin research and a reduction in research on known land disposal technologies. Resources will be maintained to address emerging technologies. New studies will be undertaken in 1988 on municipal waste incineration and continued support will be provided for listings/delistings, validation of analytical methods and bioassay screens to identify hazardous wastes quickly and cost-effectively.
- o The Agency Will Maintain A Strong Federal/State Partnership To Implement The Hazardous Waste Program: State grants are level funded at \$72.7

million to support continued development of State programs, including major efforts in permit processing, monitoring corrective action remedies, and implementing underground storage tank requirements. In addition to grant funds, \$2.0 million in cooperative agreements is provided for a new program to assist States that must implement mining waste standards.

PESTICIDES HIGHLIGHTS

The President's 1988 Budget provides 818 workyears and \$72.9 million for the Pesticides program, increases of 6 workyears and \$3.7 million, respectively, from 1987. Highlights of the 1988 President's Budget for the Pesticides program are as follows:

- o Increased Emphasis on Existing Pesticides: The Agency requests 307 workyears and \$25.6 million for the Generic Chemical Review program, an increase of 25 workyears and \$2.7 million from 1987. In 1988, increased resources will be used to accelerate the reregistration of existing chemicals. Data to support the reregistration effort will be called in at a much faster pace than in previous years.

The Agency will continue to provide resources for the Special Review program to conduct risk/benefit analyses of pesticides suspected of causing unreasonable adverse health and environmental effects.

Attention will continue to be given to the nationwide Groundwater Monitoring and Hazard Assessment program to identify and regulate pesticides that contaminate groundwater.

- o Continue with Pesticides Registration: The Agency requests 166 workyears and \$11.5 million for the registration of pesticides. Although these totals represent decreases of 30 workyears and \$1.4 million, a productivity initiative project will be conducted to keep the registration pace at current levels. The Agency will continue to give priority to applications for new chemicals and new uses to facilitate the entry of new, potentially safer, chemicals into the marketplace. The Agency expects to conduct the same number of reviews in these two

areas as in 1987. Continued attention will be given to biochemical/microbial agents in order to effectively regulate these pesticides. The Pesticides program will also be collecting user fees for this program following publication of a regulation in 1987.

- o Support Pesticides Enforcement: The Agency requests 120 workyears and \$18.0 million for the enforcement program, representing increases of 3 workyears and \$1.6 million. Regional programs are the focus of 1988 compliance monitoring strategies with resources being directed toward protecting groundwater supplies from agricultural chemicals including pesticides. The Pesticides Enforcement program will continue to encourage State participation in the nationwide Pesticides Compliance Monitoring program. Emphasis will continue to be shifted from marketplace compliance to use compliance. Funds will be increased to upgrade Certification and Training programs to ensure proper handling and application of highly toxic, restricted-use pesticides.

- o New Areas of Research Focus on Biotechnology and Groundwater: The Agency requests 116 workyears and \$13.2 million for the Pesticides research and development program, representing an increase of 8 workyears and \$0.7 million. Research activities will continue to provide support to the Office of Pesticides Programs to strengthen the Agency's understanding of pesticide effects on human health and the environment.

The 1988 increases will be focused on determining health and environmental effects of genetically engineered pesticides. New research efforts will also focus on the effects of pesticide use on groundwater.

RADIATION PROGRAM HIGHLIGHTS

The President's 1988 budget provides 228 workyears and \$13.4 million for this program. Highlights of the 1988 program are as follows:

- o Continued Support for Radiation Standards and Implementation: The 1988 request for radiation standards and guidelines totals 54 workyears and \$3.8 million, a decrease of 6 workyears and \$.2 million from 1987. The program will focus on three major areas of regulatory effort: airborne radionuclides, radioactive waste management, and Federal guidance.
- o Regional Offices Will Emphasize Technical Assistance to States: In 1988, the Regional radiation program will total 21 workyears and \$1.2 million, an increase of 3 workyears from 1987. The program will emphasize technical assistance to States in the areas of emergency response planning and in the characterization and identification of hazardous radioactive waste sites. The increase is for technical assistance to States in assessment and mitigation of radon sites.
- o Emphasis on Radon Assessment and Monitoring: The 1988 request for the radiation environmental impact assessment program is 80 workyears and \$7.1 million. The request represents a decrease of 3 workyears and \$.5 million from 1987. Major activities of this program will be to continue monitoring environmental radiation, participating in emergency preparedness and response activities and working with the Department of Energy in addressing health impacts of radon exposure.
- o The Research and Development Program will Focus on Radon Mitigation Testing and Radiological Monitoring. In 1988 the request for radiation research and development totals 74 workyears and \$1.4 million.

These resources include 8 workyears and \$1.2 million for engineering research to demonstrate techniques to reduce exposure to radon gas in homes of various structural type and in different regions of the country. The request for radon research represents a decrease of 11 workyears and \$1.3 million from the 1987 level due to the completion of a significant portion of the demonstration in 1987. Additional radon research, including mitigation methods will be addressed by the Department of Energy's expanded \$10 million program in 1988.

INTERDISCIPLINARY PROGRAM HIGHLIGHTS

The President's 1988 budget provides 602 workyears and \$54.6 million for Interdisciplinary Programs. Highlights of the 1988 President's Budget for the Interdisciplinary Program are as follows:

- o The Agency will Maintain Liaison with other Federal Agencies and Continue to Implement EPA Programs on Indian Reservations. The budget request includes \$10.2 million and 112 total workyears for these activities. This is an increase of \$2.4 million. The program will continue to ensure that actions undertaken by Federal agencies and their facilities comply with environmental laws and statutes, and conduct environmental assessments of Federally funded municipal wastewater treatment projects and of permits issued to new sources. The decrease of 2 workyears reflects an anticipated decline in required NEPA compliance activity.
- o The Agency Continues to Maintain an Effective Criminal and Civil Enforcement Presence. The budget request includes \$21.5 million and 409 workyears for the Office of Enforcement and Compliance Monitoring. This program will continue to provide for full support to a national civil and criminal investigations program. Within the base program there will be continued emphasis upon hazardous waste and drinking water enforcement. Enforcement activity targeted on significant noncompliers continues and efforts towards resolving ongoing cases are emphasized.
- o Exploratory Research Studies Will Continue. The budget request includes 81 workyears and \$22.9 million for interdisciplinary research, a decrease of 7 workyears and \$5.0 million. The interdisciplinary

research program will continue to support basic, long-term research through the Exploratory Grants and Centers program. In addition, the research program will continue to develop risk assessment guidelines, support the dissemination of scientific and technical data, and maintain the Agency's Quality Assurance program.

TOXIC SUBSTANCES HIGHLIGHTS

The President's 1988 Budget provides 840 workyears and \$83.1 million to the Toxic Substances Program.

Highlights of the 1988 President's Budget for the Toxic Substances program are as follows:

- o Maintaining an Effective and Responsive New Chemical Review Program: The 1988 President's Budget will place an increased emphasis on the New Chemical Review program to meet the 90-day statutory review time required in TSCA section 5. To meet the increasing demand in new chemical submissions, 248 workyears and \$20.2 million will be provided to the New Chemical Review program. New chemical submissions have gone from 620 submissions in 1981 to a projected 2,600 submissions in 1988. Efficiency improvements and program increases have been implemented to meet the 90-day requirement to complete new chemical reviews. In addition, the biotechnology program will be expanded in 1988 as the program develops and promulgates rulemaking. By 1988, the Agency will be collecting user fees to recoup some of the costs of new chemical review.
- o Reducing Significant Risks from Existing Chemicals Remains a Priority in 1988: The Existing Chemical program will streamline the reviewing process by focusing on inter-media chemical problems, expansion of the chemical category approach, more frequent senior level disposition meetings to focus risk potential early in the process, and the use of TSCA section 9 referrals to other agencies.
- o Support Agency Priorities Under Other Statutory Authority: Resources in the President's Budget will provide information gathering and analysis support to meet the needs of other EPA programs. The program will continue to emphasize the use of TSCA

information gathering authorities, particularly the comprehensive assessment information rule, to obtain risk data for other offices. In 1988 the Toxic Substances program will finish health effects and environmental effects test rules for the Office of Solid Waste.

- o A Continued Focus on Addressing Asbestos Hazards: In 1988, the President's Budget includes 11 work-years and \$3.3 million to maintain programs designed to address asbestos hazards. The Asbestos Hazard Emergency Response Act of 1986 and the Asbestos School Hazard Abatement Act of 1984 establish the need for compliance activities to assist in monitoring State responsibilities and to provide technical guidance.
- o Ensuring Compliance With the Toxic Substances Control Act: The President's Budget for 1988 will maintain a program that ensures compliance with toxic substances regulations. A total of 181 workyears and \$11.3 million will support EPA enforcement programs and cooperative agreements in 18 States. This is an increase of 3 workyears and \$0.4 million above 1987 levels. The major features of the 1988 program are to improve compliance assistance to the regulated community, to reduce TSCA enforcement case backlogs, and to consolidate resources from pesticides into toxic substances for management of the Laboratory Data Integrity Program.
- o New Research Efforts Will Focus on Non-Cancer Health Endpoints: The President's 1988 Budget provides a total of \$29.0 million and 193 work-years for the Toxic Substances research program. Emphasis will be placed on new research to develop non-cancer health risk assessment methodologies.

Engineering research will focus on development and evaluation of release and control methods for new and existing chemicals. The overall reduction of \$2.1 million in the research program reflects the phase-down of research in areas where the Agency has an extensive knowledge base.

The President's 1988 Budget is also requesting a 1987 rescission of \$47.5 million in Asbestos Loan and Grant funding because prior year appropriations have already greatly reduced the problem and many States have their own programs in place to complete asbestos abatement actions.

ENERGY PROGRAM HIGHLIGHTS

Overall, the President's 1988 Budget provides 83 workyears and \$58.9 million for energy research, a decrease of 3 workyears and \$0.7 million from 1987. The highlights of the 1988 Energy program are as follows:

- o Joint Report of the Special Envoys on Acid Rain:
The Joint Report of the Special Envoys on Acid Rain recommended the initiation of a five-year, \$5 billion acid rain control technology demonstration program, \$2.5 billion of this total to be provided by the federal government. The Department of Energy (DOE) will be the lead Federal agency in addressing this recommendation.

The Envoys' Report recommended that EPA provide technical expertise in selecting the clean coal commercial demonstration projects. EPA will be working closely with the DOE in the actual implementation of this program.

- o Continued Emphasis on Acid Rain Research: In 1988, support for EPA's research on acid rain will remain stable at \$55.3 million. From the inception of the program in 1980 through the 1988 President's Budget, EPA will have spent \$249.9 million on Acid Rain research. Acid Rain research throughout the Federal Government in 1988 will total \$86.1 million, essentially the same level as in 1987.

In 1988, the Acid Rain program will emphasize the development and evaluation of atmospheric models. This research will enable policymakers to predict changes in deposition levels that result from emission reductions in nearby or distant sources. Specifically, an advanced version of the Regional Acid Deposition Model will undergo testing, and we will begin evaluation and refinement of the model using field study data.

The Acid Rain program will continue to support the 150 station National Trends Network which monitors wet deposition. In addition, the program plans to have 55 dry deposition sites in operation throughout the Nation.

In 1988, EPA will enhance research that seeks to quantify the effects of acidification on aquatic systems. Major emphasis in 1988 will be placed on defining the severity of episodic acidification events, and verification of predicted future acidification.

- o Research on the LIMB Control Technology: The 1988 LIMB program totals \$3.5 million. In addition to EPA's program, it is anticipated that an inter-agency agreement will be reached with the Department of Energy for an additional \$7.0 million in 1988. The total funding level is expected to be sufficient to allow the completion of a full-scale demonstration of this technology.

MANAGEMENT AND SUPPORT PROGRAM HIGHLIGHTS

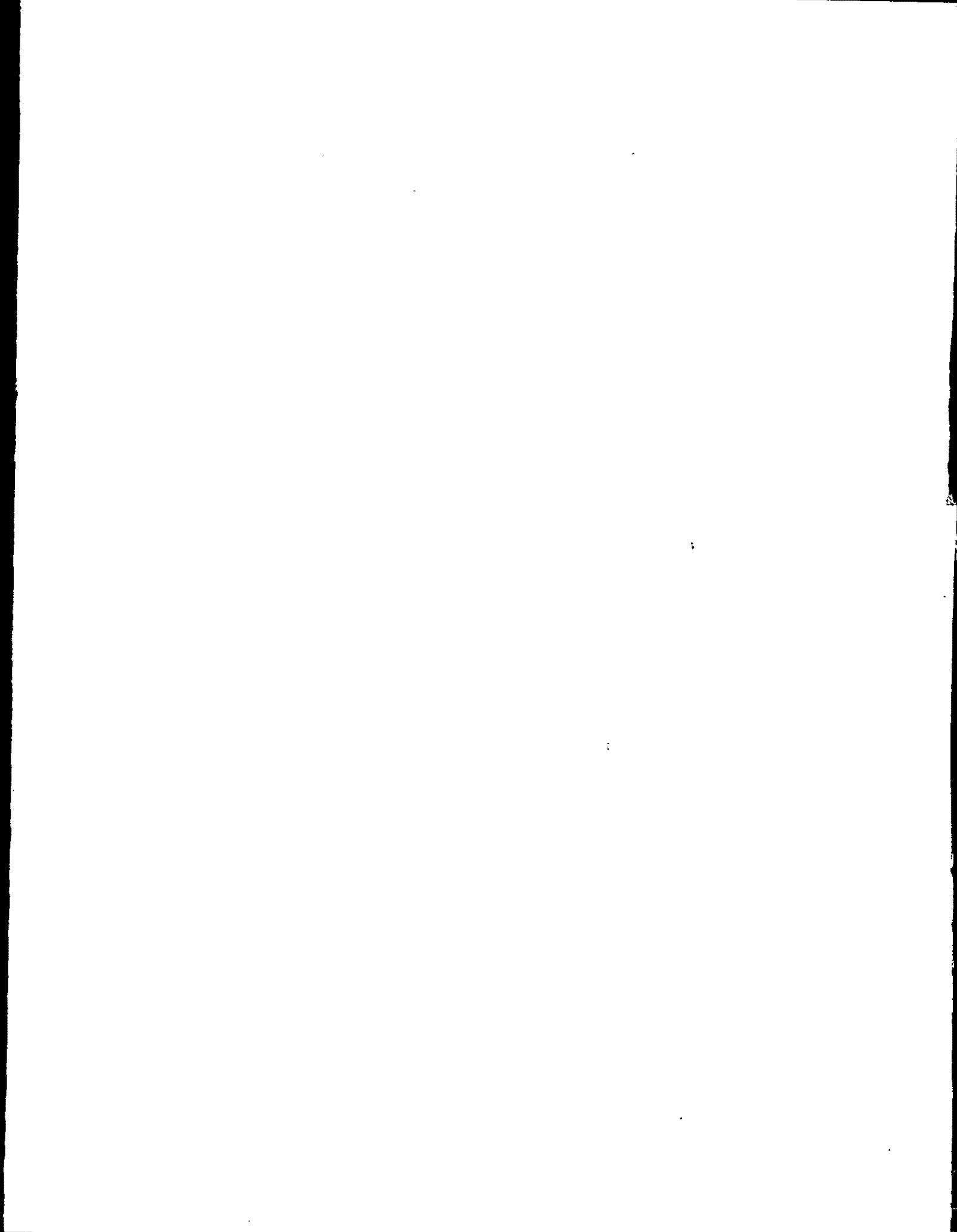
The President's FY 1988 budget requests 2,822 total workyears and \$330.0 million for management and support, a decrease of 32 workyears and an increase of \$24.6 million.

Highlights of the 1988 President's Budget for Management and Support are as follows:

- o Policy and Planning will Continue to Emphasize Regulatory Review, Risk Assessment and Management: The budget provides 281 workyears and \$24.1 million to support the Agency's policy analysis efforts. Particular emphasis will be placed on studies to evaluate the economic impact of EPA's regulations, analysis of risk management across Agency programs and the expansion of the Agency's knowledge in the area of economic benefits. Systems developed to track management outputs will continue to be given priority as well.
- o Legal Support for Agency Priorities: The budget decreases by 3 workyears for legal support to a total of 219 workyears and \$11.2 million to provide legal advice and assistance to Agency managers. The workyear decrease reflects a streamlining of program operations. The program will continue to assure legal consistency in policies and decision-making throughout the Agency. In addition, this program defends the Agency in all litigation filed against it.
- o Better Relations with Congress, the Public, State and Local Governments, and Other Federal Agencies: The budget provides 131 workyears and \$7.0 million for the Office of External Affairs. This is a decrease of one workyear and an increase of \$.1 million. This office includes five Agency outreach functions.

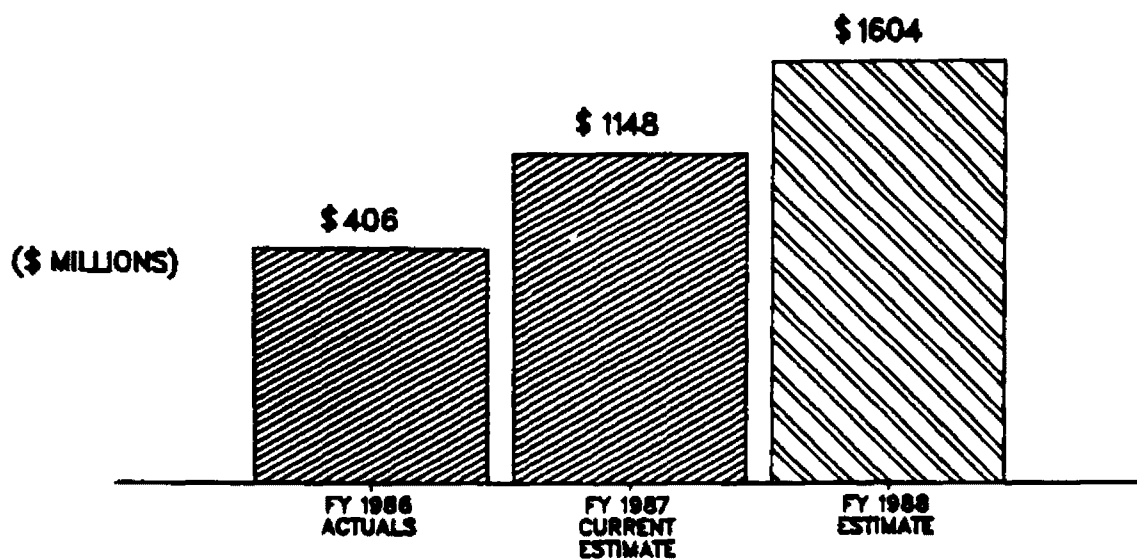
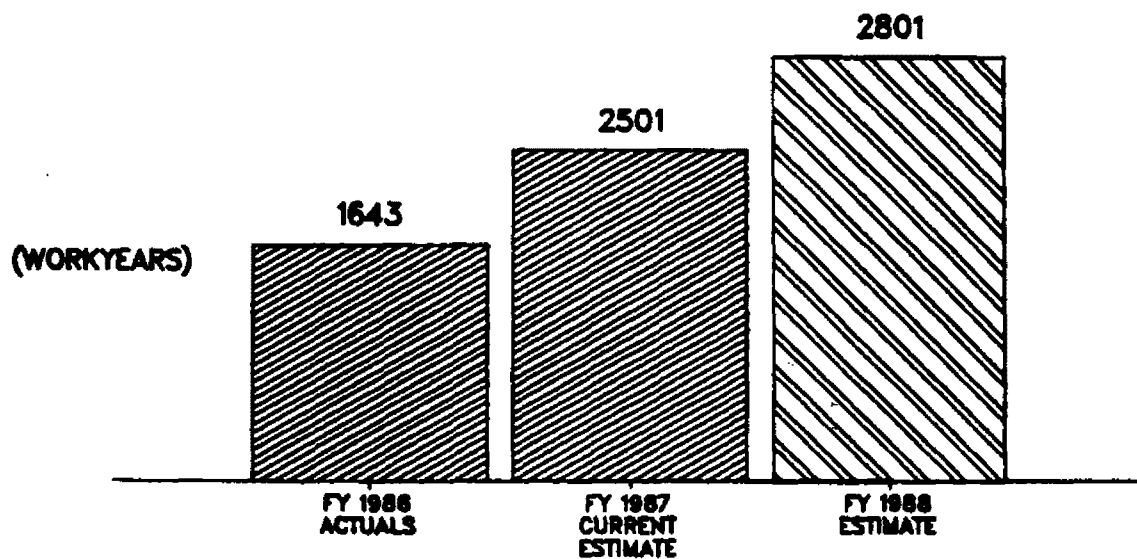
- o Continued Implementation of the Waste, Fraud, and Abuse Prevention Program: The budget provides 220 workyears and \$15.0 million to support the Office of the Inspector General. This is a decrease of 3 workyears. The Inspector General will continue its fraud prevention program as well as continue existing audit and investigative efforts within the Agency.
- o Continued Administrative and Financial Management Services to the Programs: The budget provides 1,370 workyears and \$59.8 million for Headquarters and Regional components of the Office of Administration and Resources Management. This is a decrease of 17 workyears and an increase of \$1.4 million over 1987. The reduction in workyears reflects efforts to streamline the Agency's administrative overhead functions and improve the efficiency of administrative service delivery. The Office of Administration and Resources Management will build on progress already achieved in assuring a strong system of financial internal controls, integrating financial management systems in accordance with Circular A-127, placing greater emphasis on achieving significant productivity improvements, and ensuring sufficient administrative support to Agency programs.
- o Increased Agencywide Services: The budget contains \$174.3 million for support services, an increase of \$20.8 million over 1987. These resources will provide for cost increases for general support services such as rent, utilities, maintenance, laboratory support, postage and supplies to all Agency programs.
- o Address Critical Repairs and In-House Environmental Compliance: The budget contains \$6.0 million for Buildings and Facilities. Repair and Improvement funds will be used to address critical repairs

related to employee health and safety, required alterations, and maintenance and energy conservation efforts. The Agency will emphasize projects to bring EPA facilities into compliance with environmental regulations. In addition, the Administration is proposing a \$2.5 million rescission in the Buildings and Facilities Appropriation for 1987.



SUPERFUND

SUPERFUND/LUST



SUPERFUND AND LEAKING UNDERGROUND STORAGE TANKS

PROGRAM HIGHLIGHTS

The basic authority under which the Agency addresses threats from uncontrolled hazardous waste sites is the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). SARA, which became effective October 17, 1986, also establishes a new Leaking Underground Storage Tank Trust Fund to address serious environmental problems caused by leaking petroleum tanks. Superfund is financed primarily by special taxes on industry and general revenues, while the Underground Storage Tank Trust Fund receives its revenues from a gasoline tax.

The new statute significantly broadens Superfund authorities in key response, enforcement, and research areas. It establishes cleanup standards and mandatory schedules to ensure rapid and permanent solutions in cleaning up the nation's worst hazardous waste sites. It expands State and public participation in the cleanup process and ensures that response actions at Federal facilities are addressed in a timely fashion. It sets up a new community planning and emergency right-to-know program.

In carrying out its mandate to protect public health and the environment from emergency and long-term threats from uncontrolled hazardous wastes, EPA will provide direct Federal site cleanup or will initiate enforcement actions to compel responsible parties to clean up. When direct Federal action occurs, EPA will seek to recover the cleanup costs from those responsible.

The President's 1988 budget for Superfund represents a significant commitment to eliminate the health and environmental problems caused by inadequate waste dis-

positional practices of the past. The budget provides the Agency with a \$1,578.6 million plan supported by 2,716 workyears.

This plan consists of \$1,200.0 million in new authority and \$378.6 million in prior year funds still available. The plan represents an increase of \$455.5 million and 300 workyears over 1987 operating levels and reflects the aggressive effort made to regain momentum after the 1986 slowdown. This request also includes funding for Emergency Planning and Community Right-to-Know activities.

Highlights of the President's Budget for 1988 are as follows:

- o EPA will Significantly Expand the Number of Site Designs and Constructions in 1988: EPA is requesting \$1,186.1 million supported by 1,042 total workyears for site response. This represents an increase of \$361.2 million (+44 percent) and 143 total workyears (+16 percent).

Over half of this funding will support the 60 remedial designs and 50 constructions which EPA plans to initiate in 1988. However, the total cleanup program managed by the Agency is significantly higher as responsible parties and other Federal agencies begin to play a more significant role in these final cleanup phases. They are expected to initiate an additional 51 designs and 31 constructions in 1988. Together this represents a 66 percent increase in designs and a 125 percent increase in constructions over 1987 levels.

The Agency also intends to implement site planning work at 100 sites for eventual Fund-financed clean-up efforts. Responsible parties and other Federal agencies are expected to start planning activities

at an additional 87 sites. By the end of 1988, planning work will have been initiated at over 850 National Priorities List sites.

- o EPA Will Continue to Strengthen its Emergency Response Capabilities and Encourage Community Preparedness Activities: The Agency will continue an aggressive removal program providing short-term emergency cleanup actions. Expanded removal authorities in the new statute are expected to provide more extensive cleanups. Removals will be consistent with future remedial actions at those sites where additional cleanup measures will be required. Finally, the Agency will implement the new emergency planning activities to assist communities in preparing for accidental releases of toxic chemicals.
- o Enforcement Activities Increase To Support Expanded Reauthorization Requirements: The Agency is requesting \$121 million supported by 978 workyears, an increase of \$23.3 million (+25 percent) and 122 workyears (+14 percent) for enforcement activities. Resource increases requested directly support new provisions in SARA designed to strengthen the enforcement process and encourage settlements by responsible parties. Increases also support an accelerated Federal Facility response program required under the new statute.

During 1988, the Agency expects to initiate 26 cases to compel responsible parties to undertake cleanup actions directly and 46 cases to recover Trust Fund monies where a Federal response action has occurred. In total, this represents an increase of 26 cases, or 57 percent over the 1987 caseload. This also reflects the Agency's serious commitment to maintaining a vigorous enforcement effort.

To provide greater deterrence, continued support is required for case development and ongoing cases, as well as for criminal investigations. In 1988, EPA will support 147 unresolved cases previously referred to the Department of Justice, a 21 percent increase over 1987.

- o Other Federal Agencies will Continue to Provide Support for EPA's Implementation of SARA: EPA is requesting \$94.1 million for other Federal agencies, an increase of \$30.7 million from 1987. Over 70 percent of the interagency budget is targeted to support the significantly expanded health authorities under SARA. These activities are primarily conducted by the Department of Health and Human Services. The Department of Justice also receives greater resources to support its larger caseload adequately.
- o The Research and Development Program will be Significantly Expanded: The Agency's Superfund research program will provide increased technical support to the Regions conducting site cleanups and enforcement actions. In addition, newly authorized health effects, technology evaluation, and technology transfer activities will be undertaken. A key feature of the 1988 program will be a large-scale demonstration to field test and evaluate commercially developed cleanup technologies at Superfund sites.
- o EPA Plans Enhanced Administrative Support, Financial Management, Legal Counsel, and Management Analysis: A total of 491 workyears and \$96.8 million is requested for administrative and management services to support the Superfund program. The Agency will emphasize the award and monitoring of an increasing number of Superfund contracts and grants, recruitment for Superfund employees, development of property management procedures for Superfund contracts, and meeting the program's demand for new and revised information systems. The Agency will also continue to implement improvements in financial documentation procedures for cost recovery cases.

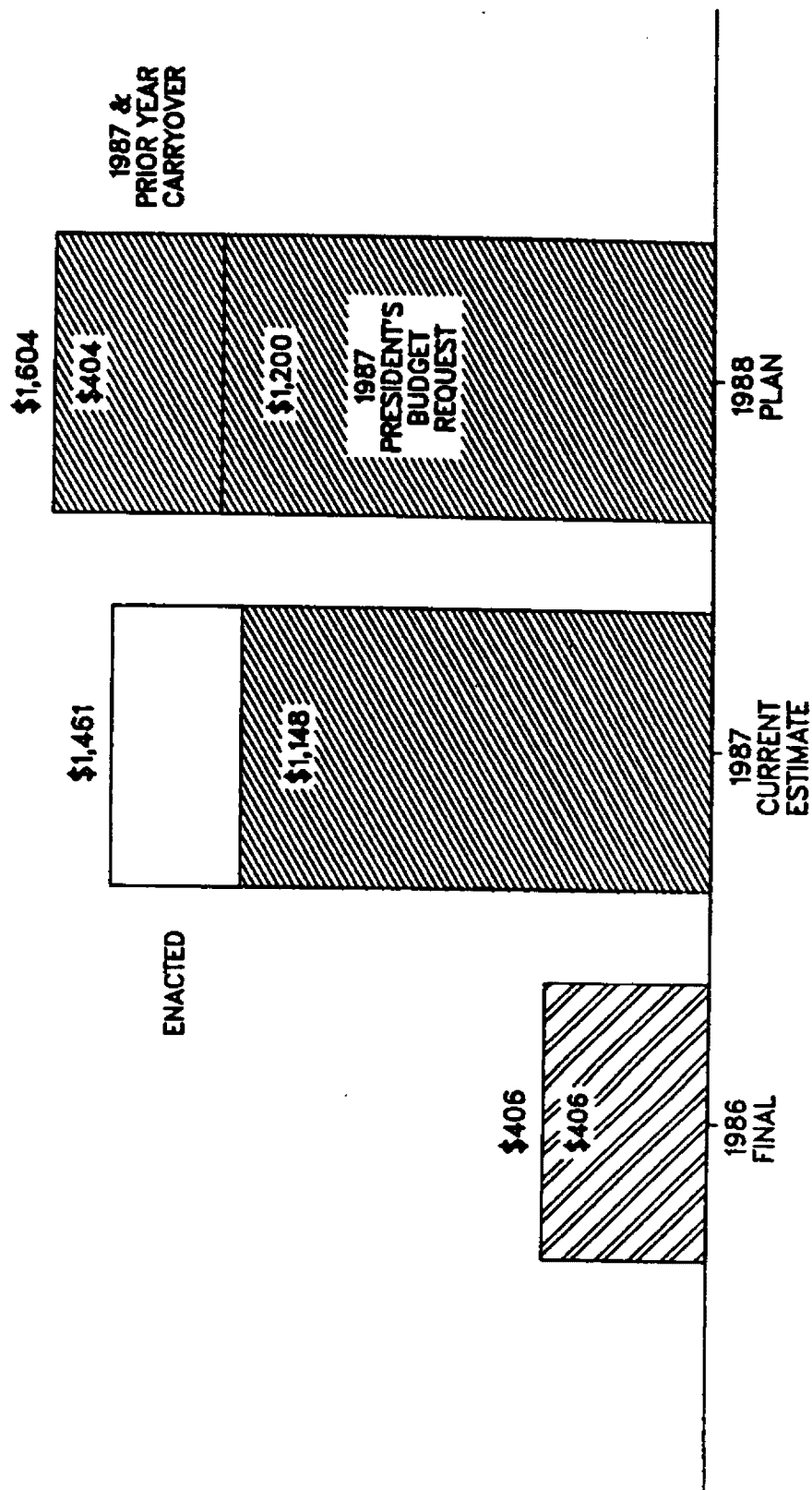
The Leaking Underground Storage Tank Program is expected to move into the implementation phase in 1988. No additional funding authority is requested as an esti-

mated \$25 million in carryover funds from 1987 are expected to support the initial phases of this program adequately. Eighty-five workyears are provided to achieve the goals of the program.

With policies, delegations, and model cooperative agreements largely developed during 1987, the primary focus in 1988 will shift to program implementation. Under cooperative agreements, States will ensure that tank owners and operators comply with corrective action requirements. In some cases, States may directly undertake these actions themselves. EPA will provide oversight and technical assistance to State efforts, and may directly respond in a very limited number of serious cases.

WITH REAUTHORIZATION FINALIZED, THE SUPERFUND/LUST REQUEST
REPRESENTS A TWO YEAR FUNDING PLAN OF MORE
THAN \$2.7 BILLION

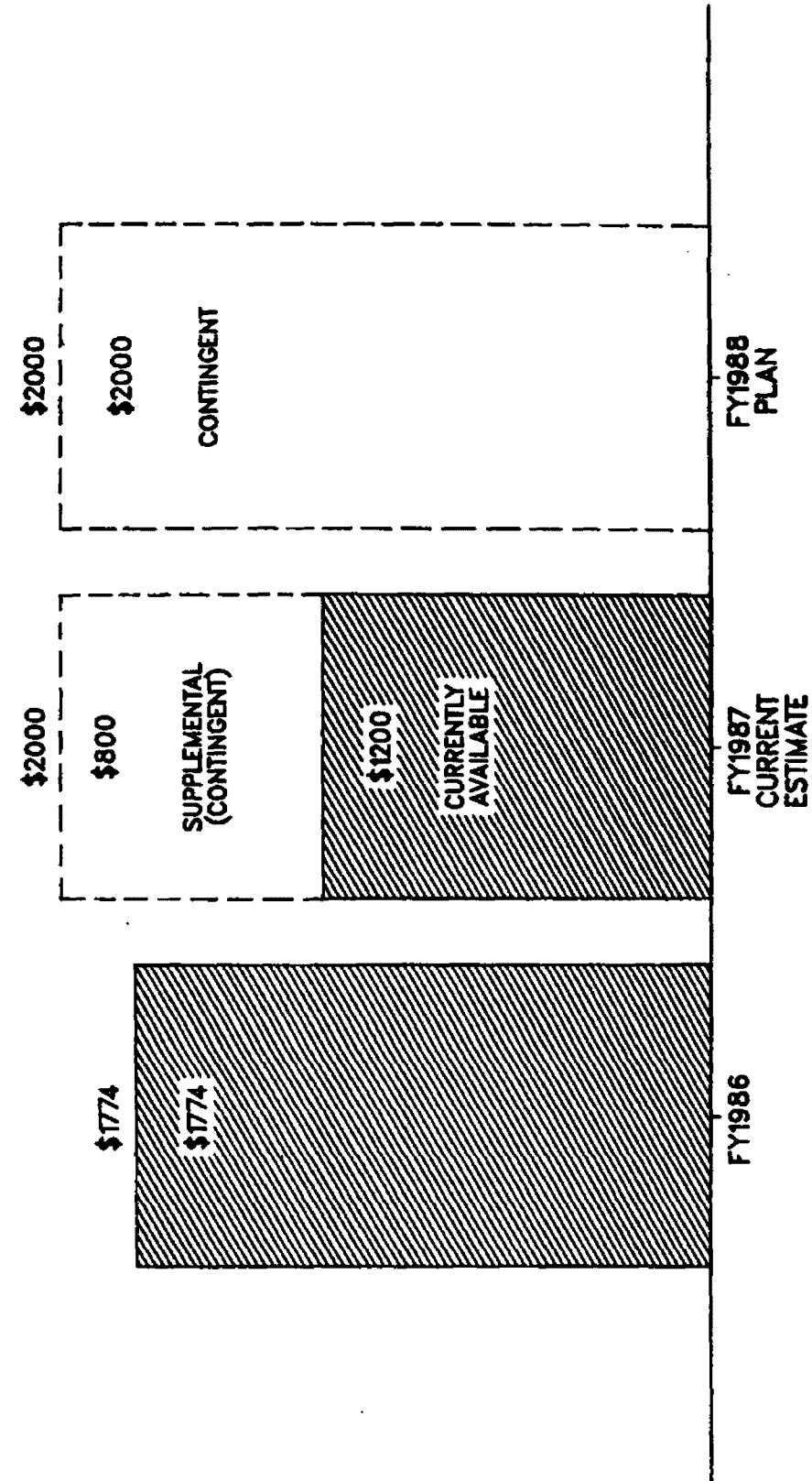
(\$ IN MILLIONS)



CONSTRUCTION GRANTS

OUR NEW CONSTRUCTION GRANTS PROPOSAL WOULD PROVIDE \$4.0 BILLION OVER 2 YEARS

(\$ IN MILLIONS)



CONSTRUCTION GRANTS SUMMARY

The Administration will submit a major new proposal totaling \$12 billion through 1993. Once the proposal is enacted, the Agency will submit a supplemental budget request for 1987 totaling \$800 million as well as an overall request for 1988 totaling \$2.0 billion.

- o Transition to State and Local Control: The revised proposal will target limited Federal funds through both grants and revolving loans to environmentally significant projects and provide States with the means to become financially self-sufficient once Federal funding is terminated in 1994. The proposal is a responsible and cost-effective way of completing the ongoing transfer of responsibility for this program to the States.

In addition, the following major program activities will continue:

- o Protecting the Federal Investment: The Agency will continue to emphasize the need for cost-effective treatment works that meet their permit requirements. The Agency will continue to focus heavily on effective State management of ongoing grants and completed projects in order to prevent waste, fraud, and abuse. The Agency will also continue to conduct intensive reviews of proposed high cost advanced treatment projects.

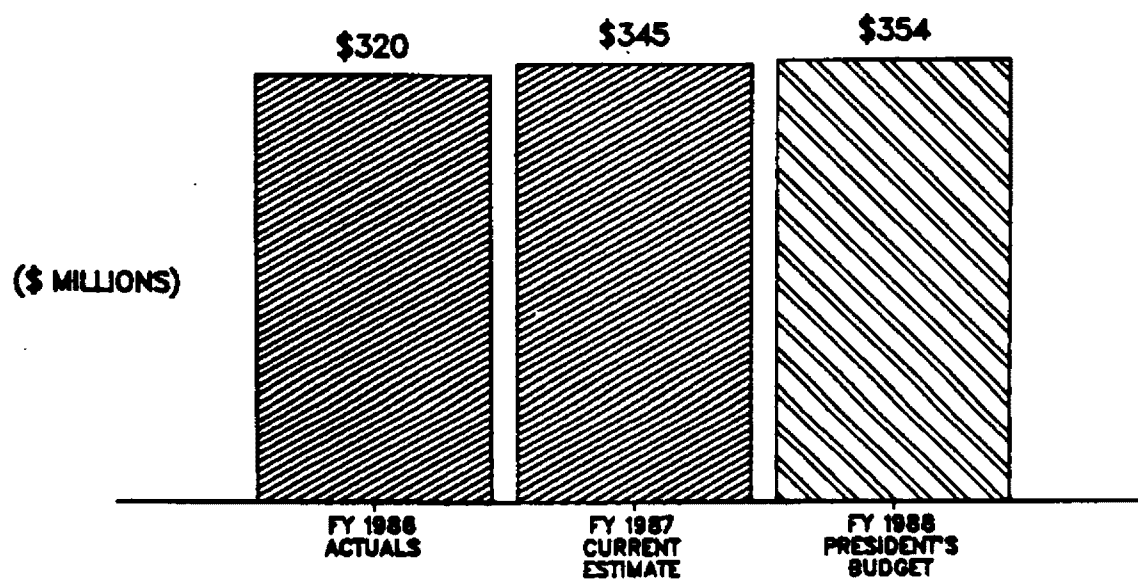
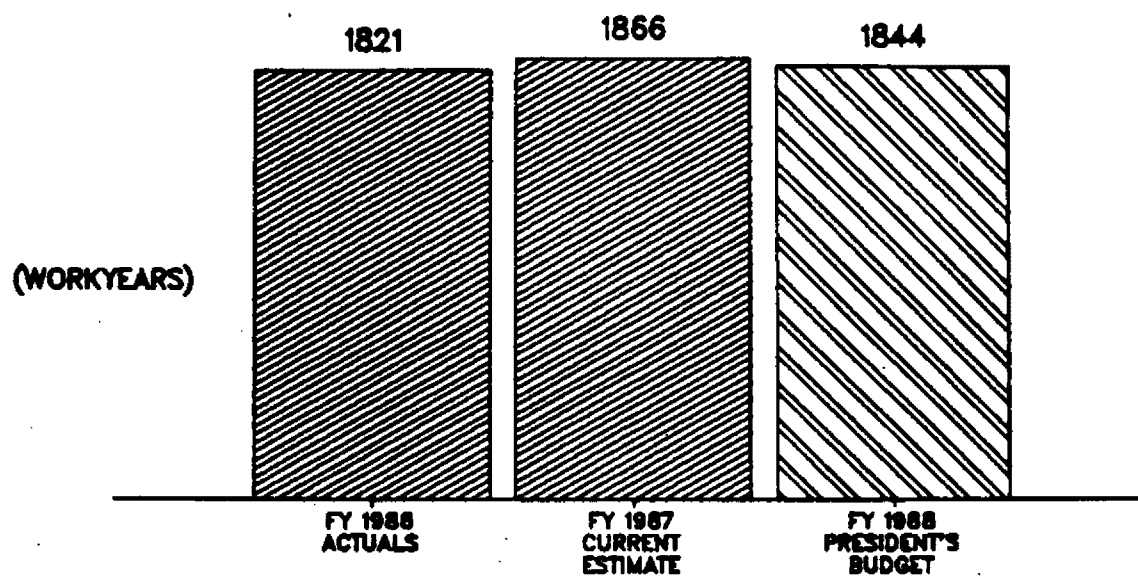
Grantees must continue to demonstrate that they have selected the most cost-effective construction alternative. For projects greater than \$10 million, grantees must provide value engineering reviews to identify unnecessarily high costs. In addition, emphasis will continue on requiring grantees to demonstrate that they have revenue systems in place adequate to operate, maintain, and replace treatment works without relying on

additional Federal dollars. Engineering firms are also now required to oversee a project's first year of operation to help ensure that it meets design and permit specifications, thus strengthening the Agency's efforts to improve the national rate of municipal compliance.

- o Continuing Basic Construction Activities: The Agency will continue to emphasize expeditiously completing and closing out ongoing projects. A total of 800 completions and 1,100 closeouts are expected during the year. The Agency will also provide funding for the Corps of Engineers inter-agency agreement at the same level as 1987.

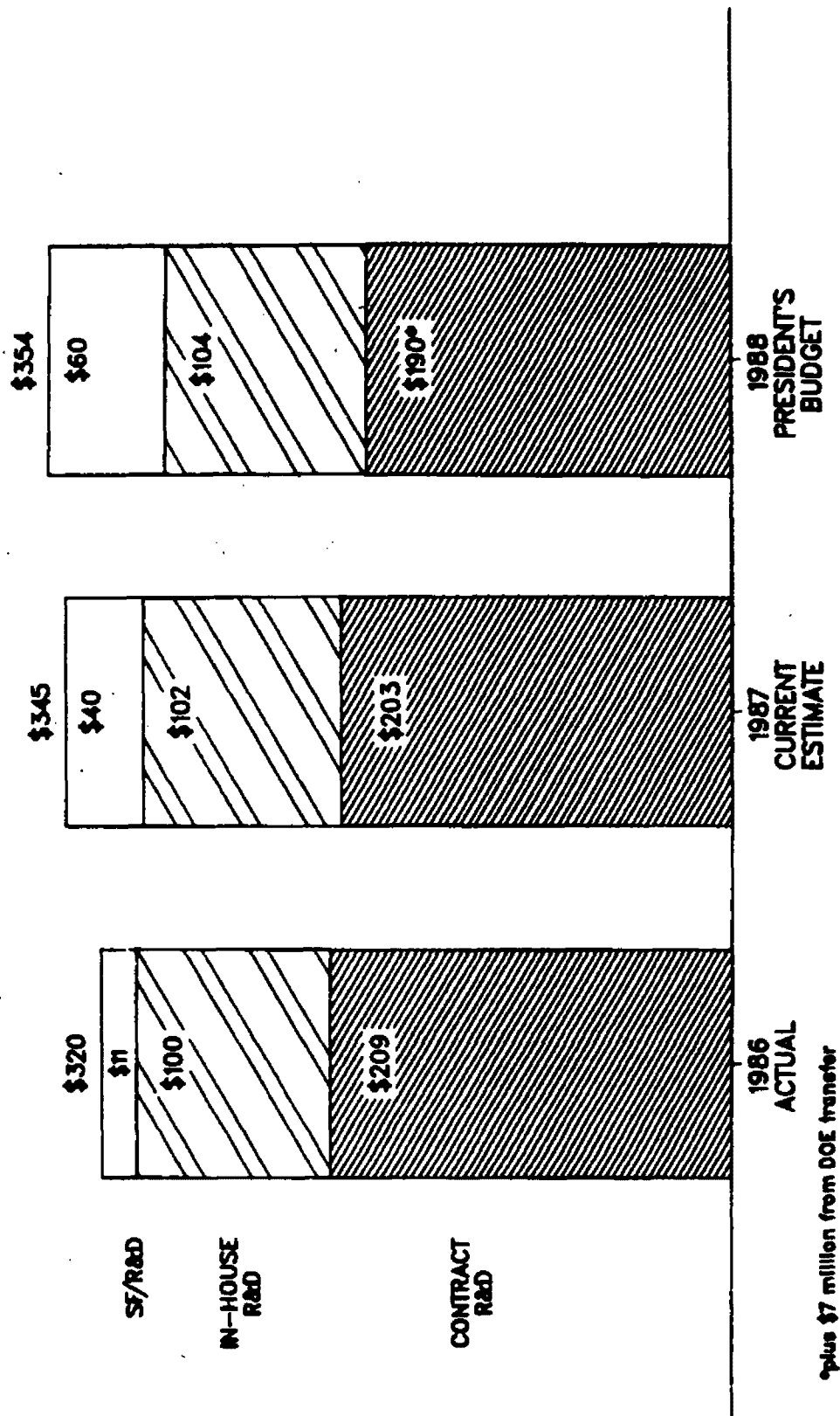
RESEARCH AND DEVELOPMENT

RESEARCH AND DEVELOPMENT



THE FY 1988 ORD BUDGET PROVIDES STRONG SUPPORT FOR THE NEW SUPERFUND REQUIREMENTS

(\$ IN MILLIONS)



RESEARCH AND DEVELOPMENT SUMMARY

The Agency's 1988 research program will continue to support the development and implementation of regulations required by statute, while expanding into areas where environmental problems have recently been identified. New issues are focused primarily in air, Superfund, and biotechnology and include problems for which the risks have not yet been fully assessed and workable controls have not been identified. The 1988 research program will continue to strengthen the Agency's capacity to better understand the health and environmental risks of these emerging problems and to develop appropriate regulatory responses.

To identify and reduce hazards to human health and the environment, the EPA research program in 1988 will emphasize research in the following four areas:

- o Understanding the causes and effects of acid rain;
- o Providing the information necessary to accelerate the clean-up of Superfund sites;
- o Providing the scientific data needed to implement the Safe Drinking Water Act Amendments of 1986; and
- o Improving our understanding of new air pollution problems including municipal waste incineration, indoor air pollution, and global warming.

1988 Research Resources

The 1988 President's Budget for EPA's Research and Development program, including Superfund and Leaking Underground Storage Tank research, totals \$354.3 million and 1,844 workyears. These resources represent an increase of \$9.1 million and a reduction of 22 workyears.

Resources associated with the research and development appropriation will be reduced by \$12.5 million to a total of \$190.0 million, a reduction of 6 percent below 1987. However, resources for research from the reauthorized Superfund Trust Fund will increase by \$20.1 million to a total of \$59.1 million, an increase of 52 percent.

Within the context of government-wide resource constraints for 1988, the reductions to our non-Superfund research program reflect the Agency's intent to phase out research that has yielded sufficient information to support well-established regulatory programs.

Continued Emphasis on the Causes and Effects of Acid Rain and Implementation of the Special Envoys Recommendations. The 1988 Acid Rain research program will continue to work toward providing accurate and reliable scientific information upon which mitigation decisions can be based. Activities will support the Lewis/Davis Special Envoys Report on Acid Rain by providing technical input to the selection of clean coal technologies to be demonstrated by the Department of Energy, maintaining an ongoing information exchange with Canada, and implementing research essential to resolve transboundary Acid Rain issues.

In 1988, EPA's Acid Rain program will be funded at a level of \$55.3 million. In 1988, particular emphasis will be placed on the development and evaluation of atmospheric models to enable policymakers to predict changes in deposition levels resulting from emission reductions at various sources. In addition, EPA will expand its work on the aquatic effects of acid rain, and will conduct expanded research on the effects of acid rain on forests.

Providing the information necessary to contain and clean up Superfund sites. The Superfund Amendments and Reauthorization Act of 1986 significantly expanded the role of EPA's research program as part of the federal effort to clean up the nation's abandoned hazardous waste sites. The 1988 research program will assist EPA's regional offices in the clean-up effort by providing on-site health and environmental risk assessment support and guidance on suitable monitoring and clean-up technologies. In addition, a program to evaluate demonstrations of commercially developed remedial technologies at actual Superfund sites will be undertaken.

Providing the scientific data needed to implement the Safe Drinking Water Act Amendments (SDWA) of 1986. The Drinking Water research program will continue to develop scientific and technical information to support implementation of the new SDWA. In 1988, emphasis will be placed on providing additional control technology information on the effectiveness of removal technologies as well as health effects data to determine risks from exposure to contaminants. In addition, the program will support monitoring, groundwater, and risk assessment activities.

Improving our understanding of new and complex air pollution problems. New scientific evidence indicates that potential environmental problems resulting from stratospheric ozone depletion, emissions from municipal waste incineration, and indoor air pollution warrant further study. In addition, international monitoring data indicate a trend toward global warming with potentially serious health and ecological impacts worldwide. In 1988 the Agency's air research program will conduct studies to assess the causes of these problems and evaluate possible regulatory and technological solutions.

Resources are distributed by medium as follows:

1988 Research Budget

<u>Research Program</u>	<u>\$(M)</u>	<u>Change from 1987</u>
Air	65.5	+2.4
Water	24.7	+0.3
Drinking Water	23.9	-0.1
Hazardous Waste	45.2	-5.3
Pesticides	13.2	+0.7
Radiation	1.4	-1.3
Interdisciplinary	22.9	-5.0
Toxic Substances	29.0	-2.1
Energy/Acid Rain	58.9	-0.7
Superfund/LUST	59.8	+20.1
Management/Support	9.8	+0.1
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	\$354.3	+9.1

Below is a discussion of areas of major research emphasis and significant changes in 1988.

- o Air Research: An overall increase of \$2.4 million will support expansion of initiatives begun in 1987 to understand the causes and effects of global climate change, and the potential health implications of municipal waste incineration. Additional resources will also support new initiatives to study the effects of ozone on forests, and provide for EPA's participation in the next National Health and Nutrition Survey, a multi-year interagency effort to track the status of the nation's environmental health. The indoor air research program will focus on source characterization and health effects.

- o Water Research: In 1988, the water quality research program will continue to provide research to help States develop water quality standards and to conduct use-attainability analyses.

The increase of \$0.3 million in 1988 will be provided for the environmental processes and effects program to support research on wetlands and near coastal waters. The Great Lakes research program will be maintained at the 1987 level.

- o Drinking Water Research: In 1988, the drinking water program will continue to provide the scientific and technical data needed to implement the Safe Drinking Water Act in the areas of contaminant occurrence and health effects, monitoring, control technology and the protection of groundwater resources.

- o Hazardous Waste Research: In 1988, the hazardous waste research program will continue to provide the technical data needed to implement and enforce the Agency's hazardous waste program, with particular emphasis on the program to ban wastes from land disposal. Studies begun in 1987 to characterize emissions from municipal waste incinerators will be continued.

Overall, hazardous waste research will decrease by \$5.3 million, reflecting the elimination of funding for an outside research center and a reduction of research on land disposal technologies consistent with new regulatory requirements emphasizing alternatives to land disposal.

- o Pesticides Research: In 1988, increased emphasis will be placed on research efforts that will provide a better understanding of the health and environmental impacts of genetically engineered pesticides. An increase of \$0.7 million will be provided for research focused on the products of biotechnology.

Research on the effects of pesticide use on groundwater will also continue in 1988, as well as as research support for pesticides registration and enforcement activities.

- o Radiation Research: In 1988, the radiation research program will continue to conduct demonstrations of techniques to reduce exposure from radon gas in residential structures. The program will also continue to provide comprehensive radiological monitoring services to meet specific Department of Energy requirements for its nuclear testing programs, especially at the Nevada test site.
- o Interdisciplinary Research: In 1988, the interdisciplinary research program will continue to support basic, long-term research. An overall reduction of \$5.0 million is due primarily to a reduction in the Grants and Centers program and elimination of Academic Training Grants. The program will continue to conduct technology transfer activities and maintain the Agency's Quality Assurance program. Emphasis will also be placed on risk assessment guidelines for complex mixtures, continuation of the Risk Assessment Forum, and implementation of the Integrated Risk Information System.
- o Toxic Substances Research: In 1988, the Agency will emphasize the development of methodologies to determine the health and environmental hazards associated with chemicals in the environment. Engineering efforts will focus on development and evaluation of release and control methods for new and existing chemicals, including asbestos and other fibers.

The overall reduction of \$2.1 million in this program reflects the phase-down of research in areas where the Agency has an extensive knowledge base.

- o Energy Research: In 1988, EPA's research on acid rain will be funded at \$55.3 million, essentially the same level as in 1987. Work will continue on the development and evaluation of atmospheric models and accelerated research on aquatic effects and materials damage. EPA will also provide input to the Department of Energy demonstration on Clean Coal technologies and maintain an information exchange with Canada.

The engineering research program will be completing a commercial demonstration of the limestone injection multistage burner (LIMB) control technology. The final stages of this project are expected to result in the completion of the commercial demonstration of LIMB on a wall-fired utility boiler.

- o Superfund/LUST Research: In 1988 research in support of the Superfund and Leaking Underground Storage Tank (LUST) program will increase by \$20.1 million. The increase reflects a major expansion of the Superfund Innovative Technology Evaluation (SITE) program (+\$9.6 million) to field test commercially developed cleanup technologies at Superfund sites, and the renovation of the Agency's Edison, New Jersey laboratory to accommodate pilot-scale testing and evaluation of these technologies (+\$5.6 million).

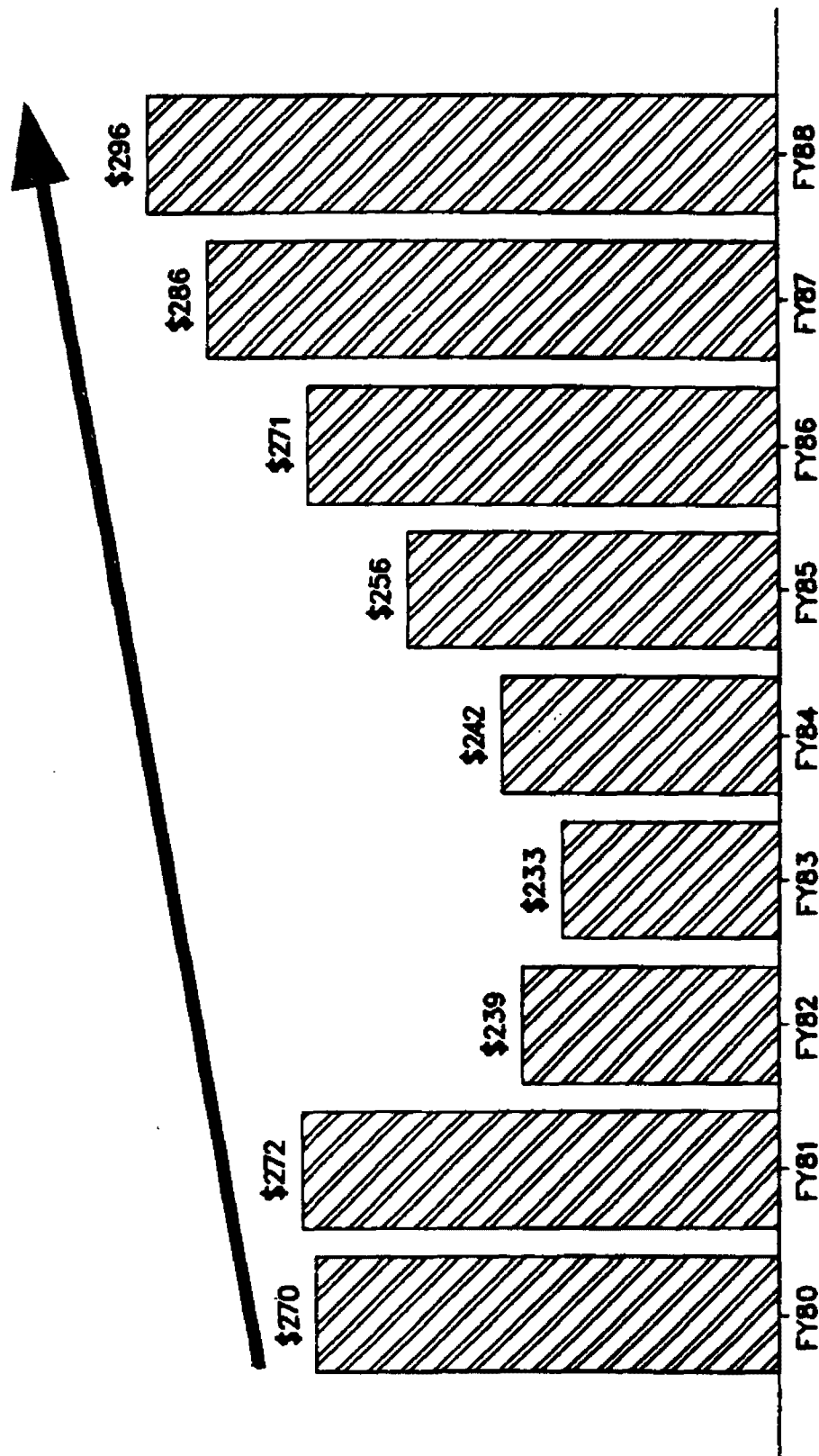
In addition, a new health research program established in 1987 will increase by \$3.4 million to provide for additional health and risk assessment support for the Superfund program.

The Superfund amendments also created a new Trust Fund to assist the States in cleaning up chemical leaks from underground storage tanks. The 1988 research program will include studies to evaluate monitoring and clean-up technologies to assist the States in implementing the Trust Fund.

STATE AND LOCAL GRANTS

EPA CONTINUES A 5 YEAR EXPANSION OF STATE GRANTS

(\$ IN MILLIONS)



STATE AND LOCAL GRANTS

The President's 1988 budget allocates \$295.7 million to support State and local environmental programs, an increase of \$9.5 million from 1987.

Recognizing the important role these grant programs play in maintaining and improving environmental quality in the States, the President's Budget for 1988 continues to maintain the commitment for these essential programs while addressing necessary fiscal constraints throughout the Federal government.

- o Addressing Critical Areas of Concern: In order to provide sufficient support for major environmental problems in the States, the President's budget provides funding for the new Wellhead Protection program as well as an increase for the Pesticides Certification and Training program. These increases will enable EPA to fulfill important new requirements under the Safe Drinking Water Amendments and assist States in making necessary improvements to their ongoing certification and training programs.
- o Maintaining the State-Federal Partnership: The President's Budget fully recognizes the need to maintain and, where appropriate, improve the partnership that has developed over the years. The funding levels proposed for 1988 recognize that the continued support of the States is necessary if we are to meet our statutory environmental goals and also address the pressing national need to control Federal expenditures.

STATE AND LOCAL GRANTS
(Dollars in Thousands)

	1986 ACTUAL OBLIGATIONS	1987 PRESIDENT'S BUDGET	1987 CURRENT ESTIMATE	1988 PRESIDENT'S BUDGET	1988-1987 DIFFERENCE
AIR					
SECTION 105.....	\$95,827.7	\$95,000.0	\$95,000.0	\$95,000.0	
WATER QUALITY					
SECTION 106.....	62,103.2	52,100.0	62,100.0	62,100.0	
DRINKING WATER					
PUBLIC WATER SYSTEMS					
PROGRAM GRANTS.....	28,215.4	28,450.0	33,450.0	33,450.0	
UNDERGROUND INJECTION					
CONTROL PROGRAM.....	8,688.0	8,500.0	9,500.0	9,500.0	
WELLHEAD PROTECTION.....				8,000.0	+\$8,000.0
HAZARDOUS WASTE					
HAZARDOUS WASTE MANAGEMENT...	55,756.4	63,000.0	66,000.0	66,000.0	
UNDERGROUND STORAGE TANKS....	6,529.5	10,000.0	6,700.0	6,700.0	
PESTICIDES					
PESTICIDES ENF. GRANTS.....	9,304.1	8,703.4	8,703.4	8,703.4	
PESTICIDES CERT. & TRAINING..	2,515.3	2,500.0	2,500.0	4,000.0	+1,500.0
TOXIC SUBSTANCES					
TOXICS ENFORCEMENT GRANTS....	2,119.1	2,200.0	2,200.0	2,200.0	
TOTAL	\$271,058.7	\$270,453.4	\$286,153.4	\$295,653.4	\$9,500.0

APPENDIX: BUDGET TABLES

ENVIRONMENTAL PROTECTION AGENCY
SUMMARY OF AGENCY RESOURCES
BY MEDIA

(WORKYEARS)

MEDIA	FY 1987 CURRENT ESTIMATE	FY 1988 BUDGET ESTIMATE	1988 - 1987 DIFFERENCE TOTAL WORKYEARS
AIR	1,775.0	1,765.7	-9.3
WATER QUALITY	2,177.0	2,124.6	-52.4
DRINKING WATER	758.0	752.7	-5.3
HAZARDOUS WASTE	1,481.6	1,485.4	+3.8
PESTICIDES	812.7	818.2	+5.5
RADIATION	185.2	166.7	-18.5
INTERDISCIPLINARY	616.8	602.2	-14.6
TOXIC SUBSTANCES	856.1	839.6	-16.5
ENERGY	85.6	82.6	-3.0
MANAGEMENT & SUPPORT	2,853.7	2,822.0	-31.7
REIMBURSEMENTS	62.0	62.0	
 SUBTOTAL OPERATING PROGRAMS	 11,663.7	 11,521.7	 -142.0
 HAZARDOUS SUBSTANCE RESPONSE TRUST FUND	 2,416.0	 2,716.0	 +300.0
 LEAKING UNDERGROUND STORAGE TANK TRUST FUND	 85.0	 85.0	 0.0
 SUBTOTAL SUPERFUND & LUST	 2,501.0	 2,801.0	 +300.0
 GRAND TOTAL	 14,164.7	 14,322.7	 +158.0

ENVIRONMENTAL PROTECTION AGENCY
SUMMARY OF AGENCY RESOURCES
BY MEDIA

(DOLLARS IN THOUSANDS)

MEDIA	FY 1987 CURRENT ESTIMATE	FY 1988 BUDGET ESTIMATE	1988 - 1987 DIFFERENCE TOTAL DOLLARS
AIR	\$244,289.1	\$241,047.7	-\$3,241.4
WATER QUALITY	238,855.6	229,442.9	-9,412.7
DRINKING WATER	105,570.9	112,311.0	+6,740.1
HAZARDOUS WASTE	258,132.8	249,375.0	-8,757.8
PESTICIDES	69,253.9	72,929.4	+3,675.5
RADIATION	15,388.9	13,428.0	-1,960.9
INTERDISCIPLINARY	56,883.1	54,608.5	-2,274.6
TOXIC SUBSTANCES	90,461.9	83,091.7	-7,370.2
ENERGY	59,547.4	58,866.6	-680.8
MANAGEMENT & SUPPORT	305,408.4	329,983.5	+24,575.1
 SUBTOTAL	 \$1,443,792.0	 \$1,445,084.3	 +\$1,292.3
 FERS/PAYRAISE*		 44,000.0	 +44,000.0
 SUBTOTAL OPERATING PROGRAMS	 \$1,443,792.0	 \$1,489,084.3	 +\$45,292.3
 HAZARDOUS SUBSTANCE RESPONSE TRUST FUND	 1,123,108.6	 1,200,000.00	 +\$76,891.4
 HAZARDOUS SUBSTANCE RESPONSE TRUST FUND CARRYOVER	 0.0	 378,600.0	 +378,600.0
 LEAKING UNDERGROUND STORAGE TANK TRUST FUND	 25,000.0	 0.0	 -25,000.0
 LEAKING UNDERGROUND STORAGE TANK TRUST FUND CARRYOVER	 0.0	 25,000.0	 +25,000.0
 SUBTOTAL SUPERFUND & LUST	 \$1,148,108.6	 \$1,603,600.0	 +\$455,491.4
 CONSTRUCTION GRANTS	 2,000,000.0 **	 2,000,000.0 **	 0.0
 GRAND TOTAL	 \$4,591,900.6	 \$5,092,684.3	 +\$500,783.7

* FEDERAL EMPLOYEE RETIREMENT SYSTEM (FERS) COSTS UNDISTRIBUTED BY MEDIA

** THE PRESIDENT WILL REQUEST \$800 MILLION IN 1987
AND \$2.0 BILLION IN 1988 AFTER REAUTHORIZATION

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