

# **ENVIRONMENTAL PROTECTION AGENCY**



**JUSTIFICATION OF APPROPRIATION ESTIMATES  
FOR COMMITTEE ON APPROPRIATIONS,  
FISCAL YEAR 1987**



ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# Summary





# ENVIRONMENTAL PROTECTION AGENCY

## 1987 Budget Estimate

### BUDGET SUMMARY

The President's request for the Environmental Protection Agency's 1987 budget totals \$2,426,466,000 supported by 13,160.7 total workyears, including \$1,376,466,000 and 11,444.7 total workyears for the Agency's operating programs, and \$1,050,000,000 and 1,716.0 total workyears for the Superfund program. At this time, no new resources are requested for the municipal waste treatment facilities construction program. However, the President will submit a budget amendment for \$1,800,000,000 once appropriate reform legislation is enacted. These resources constitute an increase to Superfund and our operating programs of \$139,069,000 and a decrease of 200 workyears in 1987.

The 1987 request contains increases for the Superfund and Hazardous Waste programs. Based upon the Administration's reauthorization proposal, requested funding for the Superfund program increases by \$188,700,000, to \$1,050,000,000, supported by 1,716.0 total workyears in 1987. This funding will support the level of activity that the Agency had planned to achieve in 1987. Pending reauthorization, the level requested may have to be adjusted based on the requirements of the new statute.

To continue the implementation of the new hazardous waste program, which is designed to prevent generation of new Superfund sites, the President's 1987 budget proposes an increase of 20 workyears and \$18 million over the 1986 current estimate. These funds will continue to support the Agency's efforts to implement new program responsibilities, such as corrective action, banning wastes from land disposal, development of alternative treatment standards, regulating underground storage tanks and additional enforcement activities.

The 1987 request for enforcement will provide the Agency with the resources necessary to continue successful implementation of its enforcement activities. It includes \$130,242,800 supported by 2,260.2 total workyears, an increase of \$908,800 and a decrease of 12.0 total workyears. Pending reauthorizing legislation, resources for the Superfund enforcement program are not included at this level. The President's Budget increases resources for hazardous waste enforcement activities. This increase, \$2,721,600, is necessary to meet the special compliance monitoring and enforcement requirements of the 1984 legislation. Additional enforcement resources are also requested for enforcement and compliance monitoring to reduce criminal case backlog and the criminal enforcement program.

The 1987 research and development program places emphasis on such high priority Agency programs as acid rain, hazardous waste, and cross-media pollutants. Our request for research activities includes \$295,163,300 supported by 1,786.2 total workyears, a decrease of \$17,337,500 and 15.4 total workyears. The 1987 acid rain research program continues to be accelerated to ensure that timely information is available to develop effective, scientifically sound, regulatory policies. Major emphasis will be on the development and evaluation of atmospheric models to assess the relative contribution of various sources of acid deposition. The hazardous waste research program in 1987 will be focused to improve the identification and control of hazardous wastes. For example, research will be expanded to develop new techniques to identify compounds containing hazardous wastes, to predict and monitor their movement through the environment, and evaluate innovative control technologies. Cross-media research will address the Agency's air toxics strategy and the effects of pesticides use on groundwater.

Grants to State and local governments are at a level of \$270,453,400. All grants directly supporting State operations except hazardous waste state grants are reduced from 1986, reflecting administrative savings and the ability of the States to assume greater responsibility for financing their activities. The \$8 million increase for the hazardous waste grants will provide additional support for the requirements of the 1984 legislation and the underground storage tank program.

The 1987 budget request also continues support in the amount of \$10,107,300 for the Chesapeake Bay program, which is designed to support Bay States through cost-sharing grants and continue EPA's role in monitoring and modeling. The 1987 request also proposes \$5,706,000 for the Great Lakes program. In addition, the budget request contains \$7,882,500 for the Coastal Environmental Management program, for water quality management in four important coastal water bodies.

Because the current authorization for the Construction Grant program expired at the end of 1985, the Agency is requesting no funds for 1987 at this time. However, the President will submit a supplemental request for \$1.8 billion once appropriate reform legislation is enacted.

A summary of budget authority for EPA's six appropriation accounts is as follows:

EPA's Request by Appropriation Account

	<u>1986</u> <u>Current Estimate</u>	<u>1987</u> <u>Budget Authority</u>	<u>Increase +</u> <u>Decrease -</u> <u>1986 vs 1985</u>
Salaries & Expenses.....	\$654,756,000	\$687,947,000	+\$33,191,000
Abatement, Control & Compliance..	552,763,000	490,785,000	-61,978,000
Research & Development.....	213,793,000	192,734,000	-21,059,000
Buildings & Facilities.....	<u>4,785,000</u>	<u>5,000,000</u>	<u>+215,000</u>
Operating Programs Subtotal..	\$1,426,097,000	\$1,376,466,000	-\$49,631,000
Construction Grants.....	\$574,200,000	...	-\$574,200,000
Hazardous Substance Response			
Trust Fund.....	<u>\$861,300,000</u>	<u>\$1,050,000,000</u>	<u>+188,700,000</u>
Total.....	\$2,861,597,000	\$2,426,466,000	-\$435,131,000

This level of resources supports Congressional and Administration efforts to reduce the deficit, both in 1986 and 1987. The 1986 estimate includes the 4.3 percent reduction required by the Gramm-Rudman-Hollings legislation as part of the government-wide program to reduce the deficit. The 1987 budget was developed within the \$144 billion deficit target mandated in the Balanced Budget and Emergency Deficit Control Act. The Agency's mission will not be significantly affected by these reduced resources.

The following briefly describes the content of each appropriation and the changes within each from the Agency's current 1986 estimates.

SALARIES AND EXPENSES

EPA's request increases by \$33,191,000 to \$687,947,000, which represents the funding necessary to continue Agency activities without reducing the current on-board level of personnel. This appropriation finances salaries and related costs associated with administering the programs within the Environmental Protection Agency. It incorporates all costs exclusive of grant programs and program-specific contractual agreements. It also provides funding for repair and improvement projects under \$25,000.

#### ABATEMENT, CONTROL AND COMPLIANCE

The Abatement, Control and Compliance appropriation finances contracts, grants, and cooperative agreements for pollution abatement, control and compliance activities. EPA's request decreases by \$61,978,000 to \$490,785,000 in 1987. The major reason for the decrease is because the President's budget request does not include funding for asbestos-in-schools loans and grants. The 1986 current estimate for this program is \$47,849,900. The decrease also supports the Administration's overall commitment to the government-wide initiative to reduce the deficit.

#### RESEARCH AND DEVELOPMENT

The 1987 budget for the Research and Development appropriation decreases by \$21,059,000 to \$192,734,000. The decrease reflects a phase out of research programs that have yielded sufficient information to support well-established regulatory programs, as well as those areas of control technology research where industry is capable of applying the information generated by the Agency to date. This decrease also supports the government-wide commitment to deficit reduction.

#### BUILDINGS AND FACILITIES

EPA requests \$5,000,000 for the Buildings and Facilities appropriation, which finances the construction, repair, improvement, extension, alteration, and purchase of fixed equipment of facilities owned, as well as existing facilities occupied by the Environmental Protection Agency. The funds in 1987 will continue to ensure healthy and safe conditions in EPA laboratories, and prevent deterioration of our owned and leased facilities.

#### CONSTRUCTION GRANTS

The 1987 President's Budget contains no new resources for the Construction Grants program at this time. It is expected that a budget amendment for \$1,800,000,000 will be submitted once appropriate reform legislation is enacted. This program provides grants to local public agencies for construction of municipal wastewater treatment facilities to assist States and localities in attaining water quality standards. With available prior year funds, emphasis will be maintained on expeditiously completing and closing out projects. Based on the Administration's legislative proposal, the overriding theme of the program continues to be the need to have States and localities move toward full assumption of program authority.

#### HAZARDOUS SUBSTANCE RESPONSE TRUST FUND

The 1987 budget requests \$1,050,000,000 supported by 1,716.0 total workyears, an increase of \$188,700,000 to support the Hazardous Substance Response Trust Fund. Because the taxing authority, which is the major source of funding for this program, expired on September 30, 1985, the Agency is operating a reduced Superfund program. Once reauthorization action is completed, and the program regains its momentum, the requested funding will enable the Agency to achieve its planned level of activity in 1987.

# ENVIRONMENTAL PROTECTION AGENCY

## Summary of Budget Authority, Obligations, Outlays and Workyears By Appropriation (dollars in thousands)

	Actual 1985	Budget Estimate 1986	Enacted 1986	Balanced Budget Reduction 1986	Current Estimate 1986	Estimate 1987
<u>Research and Development</u>						
Budget Authority.....	\$188,875.0	\$212,400.0	\$223,400.0	-\$9,607.0	\$213,793.0	\$192,734.0
Obligations.....	192,278.4	212,061.0	223,100.0 1/	-9,607.0	213,493.0	193,344.2
Outlays.....	160,780.5	193,678.0	198,258.8	-2,677.0	195,581.8	204,026.9
<u>Abatement, Control and Compliance</u>						
Budget Authority.....	480,500.0	495,500.0	577,600.0	-24,837.0	552,763.0	490,785.0
Obligations.....	517,985.3	505,911.0	585,784.0 1/	-24,837.0	560,947.0	492,699.9
Outlays.....	441,133.2	488,844.0	532,512.7	-11,272.0	521,240.7	532,473.7
<u>Salaries and Expenses</u>						
Budget Authority.....	665,698.1	670,416.0	684,176.0	-29,420.0	654,756.0	687,947.0
Obligations.....	658,985.6	670,416.0	684,031.0 1/	-29,420.0	654,611.0	687,947.0
Outlays.....	631,419.0	660,901.2	675,498.4	-25,188.0	650,310.4	675,535.6
Permanent Workyears.....	9,904.8	10,227.7	10,595.1	...	10,595.1	10,452.9
Total Workyears.....	11,001.4	11,302.7	11,582.7	...	11,582.7	11,382.7
<u>Buildings and Facilities</u>						
Budget Authority.....	12,500.0	5,000.0	5,000.0	-215.0	4,785.0	5,000.0
Obligations.....	5,228.1	10,190.0	5,148.0	-215.0	4,933.0	7,600.0
Outlays.....	3,872.3	5,195.0	5,449.5	-55.0	5,394.5	8,405.5
<u>Operations, Research and Facilities</u>						
Obligations.....	151.4	300.0	300.0	...	300.0	300.0
Outlays.....	298.7	280.0	500.0	...	500.0	500.0
<u>SUBTOTAL, OPERATING PROGRAMS</u>						
Budget Authority.....	\$1,347,573.1	\$1,383,316.0	\$1,490,176.0	-\$64,079.0	\$1,426,097.0	\$1,376,466.0
Obligations.....	\$1,374,628.8	\$1,398,878.0	\$1,498,363.0 1/	-\$64,079.0	\$1,434,284.0	\$1,381,891.1
Outlays.....	\$1,237,503.7	\$1,348,898.2	\$1,412,219.4	-\$39,192.0	\$1,373,027.4	\$1,420,941.7
Permanent Workyears.....	9,904.8	10,227.7	10,595.1	...	10,595.1	10,452.9
Total Workyears.....	11,001.4	11,302.7	11,582.7	...	11,582.7	11,382.7

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	Actual <del>1985</del> 1986	<i>President's</i> Budget <del>Estimate</del> 1986 1987	Enacted <del>1986</del> 1987	Balanced Budget Reduction 1986	Current Estimate <del>1986</del> 1987	Difference  Estimate <del>1987</del> 1988
<u>Hazardous Substance Response</u>						
<u>Trust Fund</u>						
Budget Authority.....	620,000.0 2/	900,000.0	900,000.0	-38,700.0	861,300.0	1,050,000.0
Obligations.....	480,405.2	900,000.0	882,000.0 1/	-38,700.0	843,300.0	1,252,000.0
Outlays.....	360,311.6	670,000.0	480,000.0	-7,590.0	472,410.0	770,800.0
Permanent Workyears.....	1,237.2	1,556.2	1,556.2	...	1,556.2	1,556.2
Total Workyears.....	1,350.3	1,716.0	1,716.0	...	1,716.0	1,716.0
<u>Payment to Hazardous Substance Response Trust Fund</u>						
Budget Authority.....	(44,000.0)	...	...	...	...	...
Obligations.....	(44,000.0)	...	...	...	...	...
Outlays.....	(44,000.0)	...	...	...	...	...
<u>Advances to Hazardous Substance Response Trust Fund</u>						
Budget Authority.....	...	...	...	...	(330,888.0)	(33,000.0)
Obligations.....	...	...	...	...	(330,888.0)	(33,000.0)
Outlays.....	...	...	...	...	(330,888.0)	(33,000.0)
<u>Construction Grants</u>						
Budget Authority.....	2,400,000.0	2,400,000.0	600,000.0	-25,800.0	574,200.0 3/	... 4/
Obligations.....	2,573,964.9	2,500,000.0	1,400,000.0	-25,800.0	1,374,200.0	108,267.0
Outlays.....	2,899,742.7	2,650,000.0	2,820,000.0	-258.0	2,819,742.0	2,355,200.0
<u>Scientific Activities Overseas</u>						
Obligations.....	299.4	15.0	10.0	...	10.0	150.0
Outlays.....	62.3	100.0	268.0	...	268.0	342.0
<u>Revolving Fund</u>						
Obligations.....	533.0	600.0	600.0	-28.0	572.0	750.0
Outlays.....	-117.0	15.0	-50.0	-28.0	-78.0	-1,250.0
<u>Misc. Contributed Funds</u>						
Obligations.....	36.4	30.0	50.0	...	50.0	40.0
Outlays.....	8.2	25.0	25.0	...	25.0	25.0

	Actual 1985	Budget Estimate 1986	Enacted 1986	Balanced Budget Reduction 1986	Current Estimate 1986	Estimate 1987
<u>Reimbursements - Salaries and Expenses</u>						
Obligations.....	17,789.1	20,000.0	20,000.0	-34.0	19,966.0	20,000.0
Permanent Workyears.....	56.8	53.0	53.0	...	53.0	53.0
Total Workyears.....	63.6	62.0	62.0	...	62.0	62.0
<u>Reimbursements - Superfund</u>						
Obligations.....	5,584.1	7,000.0	18,000.0	-398.0	17,602.0	30,000.0
<b>TOTAL ENVIRONMENTAL PROTECTION</b>						
<b>AGENCY</b>						
Budget Authority.....	\$4,367,573.1	\$4,683,316.0	\$2,990,176.0	-\$128,579.0	\$2,861,597.0	\$2,426,466.0
Obligations.....	\$4,453,240.9	\$4,826,523.0	\$3,819,022.0	-\$129,039.0	\$3,689,984.0	\$2,793,098.1
Outlays.....	\$4,497,511.5	\$4,669,038.2	\$4,712,462.4	-\$47,068.0	\$4,665,394.4	\$4,546,058.7
Permanent Workyears.....	11,198.8	11,836.9	12,204.3	...	12,204.3	12,062.1
Total Workyears.....	12,415.3	13,080.7	13,360.7	...	13,360.7	13,160.7

- 1/ Obligations for these appropriations reflect the reduction to Consulting Services pursuant to P.L. 99-160: Salaries and Expenses - \$145.0; Research and Development - \$133.0; Abatement, Control, and Compliance - \$710.0. The reduction for Superfund of \$240.0 was considered in the estimates for that program.
- 2/ The 1985 appropriation does not reflect a receipt shortfall of \$13,918.0 which could reduce budget authority to \$606,082.0.
- 3/ An additional \$1.8 billion has been appropriated pending reauthorization.
- 4/ An amended budget request for \$1.8 billion will be submitted immediately after appropriate reform legislation is enacted.

# ENVIRONMENTAL PROTECTION AGENCY

## Summary of Budget Authority, Obligations, Outlays and Workyears By Media (dollars in thousands)

	Actual 1985	Budget Estimate 1986	Enacted 1986	Balanced Budget Reduction 1986	Current Estimate 1986	Estimate 1987
<u>Air</u>						
Budget Authority.....	\$234,580.1	\$238,511.9	\$259,548.4	-\$11,160.5	\$248,387.9	\$239,228.4
Obligations.....	232,624.2	240,879.6	257,426.0	-11,160.5	246,265.5	239,549.0
Outlays.....	233,082.6	255,665.9	229,613.7	-6,624.9	222,988.8	235,868.6
Permanent Workyears.....	1,583.2	1,604.0	1,713.9	...	1,713.9	1,660.2
Total Workyears.....	1,710.0	1,751.6	1,830.6	...	1,830.6	1,791.1
<u>Water Quality</u>						
Budget Authority.....	251,717.3	241,686.2	256,580.4	-11,033.3	245,547.1	217,841.0
Obligations.....	249,909.9	244,426.5	258,852.0	-11,033.3	247,818.7	218,584.0
Outlays.....	240,952.3	241,236.4	246,907.3	-6,595.9	240,311.4	235,732.7
Permanent Workyears.....	1,957.0	2,003.3	2,056.5	...	2,056.5	2,021.1
Total Workyears.....	2,191.5	2,248.6	2,283.0	...	2,283.0	2,181.8
<u>Drinking Water</u>						
Budget Authority.....	85,992.1	88,125.8	91,230.4	-3,923.2	87,307.2	84,126.5
Obligations.....	85,244.9	89,040.4	90,144.0	-3,923.2	86,220.8	84,242.0
Outlays.....	86,081.7	98,286.3	87,423.1	-2,356.7	85,066.4	83,434.7
Permanent Workyears.....	543.4	584.5	595.8	...	595.8	587.8
Total Workyears.....	604.3	642.3	639.8	...	639.8	639.8
<u>Hazardous Waste</u>						
Budget Authority.....	191,912.1	237,353.8	248,544.4	-10,686.8	237,857.6	256,236.2
Obligations.....	194,075.6	240,244.7	248,758.0	-10,686.8	238,071.2	256,144.0
Outlays.....	150,793.3	197,408.7	214,677.5	-5,595.5	209,082.0	239,991.5
Permanent Workyears.....	1,045.2	1,217.9	1,284.5	...	1,284.5	1,301.3
Total Workyears.....	1,176.2	1,367.9	1,442.5	...	1,442.5	1,462.3
<u>Pesticides</u>						
Budget Authority.....	66,928.4	70,506.9	69,836.5	-3,002.9	66,833.6	69,433.1
Obligations.....	70,521.5	71,031.4	70,969.0	-3,002.9	67,966.1	69,467.0
Outlays.....	61,155.0	57,560.2	67,142.7	-1,947.5	65,195.2	68,720.5
Permanent Workyears.....	734.6	735.1	741.2	...	741.2	734.7
Total Workyears.....	797.5	809.1	807.6	...	807.6	803.8

	Actual 1985	Budget Estimate 1986	Enacted 1986	Balanced Budget Reduction 1986	Current Estimate 1986	Estimate 1987
<u>Radiation</u>						
Budget Authority.....	13,003.4	9,782.4	10,202.1	-438.6	9,763.5	11,972.0
Obligations.....	12,354.5	9,828.5	12,707.0	-438.6	12,268.4	11,989.0
Outlays.....	16,068.9	9,758.4	12,723.5	-325.6	12,397.9	12,136.4
Permanent Workyears.....	149.1	141.3	155.3	...	155.3	152.0
Total Workyears.....	161.4	147.3	160.0	...	160.0	157.0
<u>Noise</u>						
Budget Authority.....	...	...	...	...	...	...
Obligations.....	...	...	...	...	...	...
Outlays.....	45.9	469.7	395.9	...	395.9	184.7
<u>Interdisciplinary</u>						
Budget Authority.....	56,264.1	47,166.3	56,272.8	-2,419.6	53,853.2	47,874.9
Obligations.....	55,489.9	47,292.6	55,770.0	-2,419.6	53,350.4	48,043.0
Outlays.....	54,857.8	48,252.6	60,916.3	-1,343.6	59,572.7	52,466.7
Permanent Workyears.....	482.5	491.0	537.7	...	537.7	544.3
Total Workyears.....	533.0	521.5	568.2	...	568.2	570.0
<u>Toxic Substances</u>						
Budget Authority.....	84,536.2	94,952.1	143,331.3	-6,163.1	137,168.2	89,327.7
Obligations.....	124,604.6	95,511.7	149,397.0	-6,163.1	143,233.9	90,523.0
Outlays.....	84,562.6	94,151.1	125,687.4	-2,911.3	122,776.1	128,594.4
Permanent Workyears.....	767.3	796.6	804.8	...	804.8	792.5
Total Workyears.....	852.2	856.3	865.0	...	865.0	858.2
<u>Energy</u>						
Budget Authority.....	58,592.2	67,317.3	61,707.7	-2,654.3	59,053.4	59,589.4
Obligations.....	56,812.5	67,219.5	61,957.0	-2,654.3	59,302.7	59,613.0
Outlays.....	41,692.6	58,659.6	62,301.4	-857.3	61,444.1	61,349.2
Permanent Workyears.....	94.1	89.2	88.4	...	88.4	77.2
Total Workyears.....	105.7	97.7	97.0	...	97.0	85.8
<u>Management and Support</u>						
Budget Authority.....	291,547.2	282,913.3	287,922.0	-12,381.7	275,540.3	295,836.8
Obligations.....	287,763.1	283,513.1	288,223.0	-12,381.7	275,841.3	296,137.1
Outlays.....	264,338.7	282,254.3	298,981.1	-10,578.7	288,402.4	294,056.0
Permanent Workyears.....	2,548.4	2,564.8	2,617.0	...	2,617.0	2,581.8
Total Workyears.....	2,869.6	2,860.4	2,889.0	...	2,889.0	2,832.9



	Actual 1985	Budget Estimate 1986	Enacted 1986	Balanced Budget Reduction 1986	Current Estimate 1986	Estimate 1987
<u>Buildings and Facilities</u>						
Budget Authority.....	12,500.0	5,000.0	5,000.0	-215.0	4,785.0	5,000.0
Obligations.....	5,228.1	10,190.0	5,148.0	-215.0	4,933.0	7,600.0
Outlays.....	3,872.3	5,195.0	5,449.5	-55.0	5,394.5	8,405.5
<u>SUBTOTAL, OPERATING PROGRAMS</u>						
Budget Authority.....	\$1,347,573.1	\$1,383,316.0	\$1,490,176.0	-\$64,079.0	\$1,426,097.0	\$1,376,466.0
Obligations.....	\$1,374,628.8	\$1,398,878.0	\$1,499,351.0	-\$64,079.0	\$1,435,272.0	\$1,381,891.1
Outlays.....	\$1,237,503.7	\$1,348,898.2	\$1,412,219.4	-\$39,192.0	\$1,373,027.4	\$1,420,941.7
Permanent Workyears.....	9,904.8	10,227.7	10,595.1	...	10,595.1	10,452.9
Total Workyears.....	11,001.4	11,302.7	11,582.7	...	11,582.7	11,382.7
<u>Hazardous Substance Response</u>						
<u>Trust Fund</u>						
Budget Authority.....	620,000.0 <sup>1/</sup>	900,000.0	900,000.0	-38,700.0	861,300.0	1,050,000.0
Obligations.....	480,405.2	900,000.0	882,000.0	-38,700.0	843,300.0	1,252,000.0
Outlays.....	360,311.6	670,000.0	480,000.0	-7,590.0	472,410.0	770,800.0
Permanent Workyears.....	1,237.2	1,556.2	1,556.2	...	1,556.2	1,556.2
Total Workyears.....	1,350.3	1,716.0	1,716.0	...	1,716.0	1,716.0
<u>Payment to Hazardous Substance</u>						
<u>Response Trust Fund</u>						
Budget Authority.....	(44,000.0)	...	...	...	...	...
Obligations.....	(44,000.0)	...	...	...	...	...
Outlays.....	(44,000.0)	...	...	...	...	...
<u>Advances to Hazardous</u>						
<u>Substance Response Trust Fund</u>						
Budget Authority.....	...	...	...	...	(330,888.0)	(33,000.0)
Obligations.....	...	...	...	...	(330,888.0)	(33,000.0)
Outlays.....	...	...	...	...	(330,888.0)	(33,000.0)
<u>Construction Grants</u>						
Budget Authority.....	2,400,000.0	2,400,000.0	600,000.0	-25,800.0	574,200.0 <sup>2/</sup>	... <sup>3/</sup>
Obligations.....	2,573,964.9	2,500,000.0	1,400,000.0	-25,800.0	1,374,200.0	108,267.0
Outlays.....	2,899,742.7	2,650,000.0	2,820,000.0	-258.0	2,819,742.0	2,355,200.0
<u>Scientific Activities Overseas</u>						
Obligations.....	299.4	15.0	10.0	...	10.0	150.0
Outlays.....	62.3	100.0	268.0	...	268.0	342.0

	Actual 1985	Budget Estimate 1986	Enacted 1986	Balanced Budget Reduction 1986	Current Estimate 1986	Estimate 1987
<u>Revolving Fund</u>						
Obligations.....	533.0	600.0	600.0	-28.0	572.0	750.0
Outlays.....	-117.0	15.0	-50.0	-28.0	-78.0	-1,250.0
<u>Misc. Contributed Funds</u>						
Obligations.....	36.4	30.0	50.0	...	50.0	40.0
Outlays.....	8.2	25.0	25.0	...	25.0	25.0
<u>Reimbursements - Salaries and Expenses</u>						
Obligations.....	17,789.1	20,000.0	20,000.0	-34.0	19,966.0	20,000.0
Permanent Workyears.....	56.8	53.0	53.0	...	53.0	53.0
Total Workyears.....	63.6	62.0	62.0	...	62.0	62.0
<u>Reimbursements - Superfund</u>						
Obligations.....	5,584.1	7,000.0	18,000.0	-398.0	17,602.0	30,000.0
<u>TOTAL ENVIRONMENTAL PROTECTION</u>						
<u>AGENCY</u>						
Budget Authority.....	\$4,367,573.1	\$4,683,316.0	\$2,990,176.0	-\$128,579.0	\$2,861,597.0	\$2,426,466.0
Obligations.....	\$4,453,240.9	\$4,826,523.0	\$3,820,011.0	-\$129,039.0	\$3,690,972.0	\$2,793,098.1
Outlays.....	\$4,497,511.5	\$4,669,038.2	\$4,712,462.4	-\$47,068.0	\$4,665,394.4	\$4,546,058.7
Permanent Workyears.....	11,198.8	11,836.9	12,204.3	...	12,204.3	12,062.1
Total Workyears.....	12,415.3	13,080.7	13,360.7	...	13,360.7	13,160.7

## NOTE:

The 1986 obligation estimates for the operating programs do not reflect the reduction for Consulting Services pursuant to P.L. 99-160; Salaries and Expense - \$145.0; Research and Development - \$133.0; and Abatement, Control, and Compliance - \$710.0. The reduction for Superfund of \$240.0 was considered in the estimates for that program.

- 1/ The 1985 appropriation does not reflect a receipt shortfall of \$13,918.0 which could reduce budget authority to \$606,082.0.
- 2/ An additional \$1.8 billion has been appropriated pending reauthorization.
- 3/ An amended budget request for \$1.8 billion will be submitted immediately after appropriate reform legislation is enacted.

# Air



ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# AIR

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
APPROPRIATION							
Salaries & Expenses	\$80,950.0	\$81,852.3	\$86,881.1	-\$3,735.9	\$83,145.2	\$84,208.4	\$1,063.2
Abatement Control and Compliance	\$111,596.8	\$115,828.0	\$126,328.0	-\$5,432.1	\$120,895.9	\$117,828.0	-\$3,067.9
Research & Development	\$40,077.4	\$40,831.6	\$46,339.3	-\$1,992.5	\$44,346.8	\$37,192.0	-\$7,154.8
TOTAL, Air	\$232,624.2	\$238,511.9	\$259,548.4	-\$11,160.5	\$248,387.9	\$239,228.4	-\$9,159.5
PERMANENT WORKYEARS	1,583.2	1,604.0	1,713.9		1,713.9	1,660.2	-53.7
TOTAL WORKYEARS	1,710.0	1,751.6	1,830.6		1,830.6	1,791.1	-39.5
OUTLAYS	\$233,082.6	\$255,665.9	\$229,613.7	-\$6,624.9	\$222,988.8	\$235,868.6	\$12,879.8
AUTHORIZATION LEVELS	Authorization for the Clean Air Act expired September 30, 1981. Reauthorization is pending.						

## OVERVIEW AND STRATEGY

The Clean Air Act authorizes a nationwide program of air quality planning, regulation, enforcement, and research for control of air pollution. The EPA strategy for implementing the nationwide program is based on five major goals: (1) reduce the risk of exposure to air toxics; (2) achieve National Ambient Air Quality Standards (NAAQSs) set to protect public health; (3) increase the capacity and improve the effectiveness of State and local air quality agencies; (4) determine the policy alternatives and strategy options available to address acid deposition and stratospheric ozone depletion; (5) develop and support programs to maintain improvements in air quality; and (6) research to support regulatory programs.

### Reduce Risk of Exposure to Air Toxics

In 1987, EPA will continue to better define the nature and magnitude of the air toxics problem and to develop and strengthen the regulatory options for dealing with the problem. In June 1985, EPA completed a comprehensive national strategy for addressing both routine and accidental releases of air toxics. The strategy includes an enhanced and refocused Federal air toxics program to address problems that are national in scope, a new program to help State and local governments strengthen their capabilities to deal with air toxics problems within their boundaries, and an expanded effort to devise strategies to reduce risk from multi-media, multi-source pollutants in specific geographic areas.

In 1987, EPA will continue a more aggressive program for listing and regulating toxic air pollutants under section 112 of the Clean Air Act. Decisions for Federal regulatory actions will be made for 8-12 compounds.

EPA will also continue to develop and promulgate National Emission Standards for Hazardous Air Pollutants (NESHAPs) in 1987. These standards apply to both new and existing sources of hazardous air pollutants. In 1987, EPA will have NESHAPs under development for 14 hazardous pollutants, more than in any previous year. In addition, EPA will propose regulations for controlling toxic air emissions from seven types of hazardous waste treatment, storage, and disposal facilities. EPA's Regional air program staff will provide support in addressing air quality problems associated with Superfund sites on the National Priority List and in issuing the permits required by the Resource Conservation and Recovery Act.

The success of the program for reducing lead in vehicle fuels has prompted the makers of fuels to add new components and additives. In 1987, EPA will take active steps to ensure that substitutes for lead do not contribute to emissions of hazardous air pollutants or degrade the operation of motor vehicle emission controls. EPA will also give high priority to technology assessments for particulate controls for heavy-duty diesel vehicle engines to help ensure that manufacturers meet the technology forcing standards that become effective starting with the 1988 model year.

### Achieve NAAQSs Nationwide

The establishment of NAAQSs at levels that protect public health and prevent other adverse effects has been the keystone of the national air quality program. The need to revise NAAQSs is determined based on regular assessment of the most accurate and up-to-date scientific data available on the health and other effects of the various pollutants. In 1987, EPA will promulgate revised or reaffirmed NAAQSs for sulfur dioxide and size-specific particulate matter (PM<sub>10</sub>). EPA will also propose to revise or reaffirm the NAAQSs for lead.

EPA's strategy for achieving the NAAQSs centers on working with States to complete and enforce the State Implementation Plans (SIPs) required by the Clean Air Act. Although air quality has generally improved as a result of the measures in SIPs, many of the SIPs have proven inadequate to meet NAAQSs by statutory deadlines.

The NAAQS for ozone has proven the most difficult standard to meet. As many as 35 of the 53 large urban areas now in violation of the standard will still not meet the standard by December 1987. The affected population of these post-1987 non-attainment areas could total over 80 million. In 1987, EPA will give priority to strengthening control of the volatile organic compounds (VOCs) that contribute to ozone formation. EPA's ozone reduction program for 1987 will be based on an aggressive strategy that will be completed in 1986.

A continued reduction in emissions from motor vehicles will be a major factor in meeting NAAQSs, particularly the standards for ozone, carbon monoxide, and nitrogen dioxide. To help ensure that manufacturers design and produce vehicles that meet emission standards throughout their useful lives, EPA will maintain a comprehensive Federal compliance program. This program includes preproduction certification of emission control systems, selective enforcement audits at manufacturers' facilities, and recalls of insufficiently controlled vehicles. In 1987, EPA will tighten control of vehicle refueling and evaporative emission losses and of heavy-duty vehicle exhaust emissions.

Tampering with vehicle emission control systems, switching to leaded fuels, and failing to properly maintain engines greatly increase pollutant emissions. Federal efforts alone cannot effectively address these problems. EPA will continue to work with State and local governments to establish and maintain effective vehicle inspection and maintenance programs and anti-tampering/anti-fuel switching programs.

In addition to remedying SIPs still inadequate to meet NAAQSs and ensuring compliance of in-use vehicles, the States and EPA will carry out a vigorous, comprehensive program aimed at achieving continuous compliance by stationary sources, particularly major sources in or affecting areas not meeting the health-related NAAQSs. The program will emphasize implementation of the "timely and appropriate" guidance, the Post-1982 Enforcement Policy, and guidance defining a Federally reportable violation. In the enforcement of SIPs, sources of VOCs affecting ozone levels in areas not meeting standards will receive increased attention. Emissions from these sources are of concern, not only because they contribute to unhealthy ozone levels, but also because their components may be hazardous to public health.

#### Strengthen State and Local Programs

EPA will continue to support State and local air pollution control programs by identifying obstacles to program effectiveness, providing direct program assistance, facilitating information exchange, and maintaining national monitoring and data management systems. The National Air Audit System, used to identify obstacles to State and local control agency effectiveness and to help EPA define more efficient and meaningful national programs, will continue on the biennial cycle begun in 1986. During 1987, all State and key local agencies will be evaluated using national criteria for five major program areas: air quality planning, new source review, compliance assurance, air quality monitoring, and vehicle inspection and maintenance. The results of the national audit will be used to identify both the problems of individual State and local agencies and more generic national problems.

During 1987, State and key local agencies, with the support of EPA Regional Offices, will initiate the actions necessary to address the problems identified by the 1986 audits. Nationally, EPA will use the results of the 1985 and 1986 summary reports to review and adjust priorities and resources to better support State and local needs and achieve the desired environmental results. The Section 105 State grant program will be included in an anticipated legislative proposal for block grants designed to give States more flexibility and autonomy in administering environmental programs.



## Address Acid Deposition, Stratospheric Ozone Depletion, and Indoor Air Pollution

In 1987, EPA will carry out an acid deposition program that includes accelerated research and analyses of policy and implementation issues. The EPA Office of Research and Development will continue to develop the scientific and technical information required to respond to policy issues. The Office of Air and Radiation will insure that research efforts are focused on policy information needs and will review new research results for their policy implications. EPA will continue in 1987 to identify and resolve possible implementation issues through the State Acid Rain (STAR) program.

Section 157 of the Clean Air Act requires EPA to issue regulations to reduce chlorofluorocarbon (CFC) emissions if the Administrator of EPA determines that the emissions endanger public health and the environment. In response to a suit brought by the Natural Resources Defense Council, EPA developed and adopted a comprehensive CFC action strategy in 1985. To carry out this strategy, EPA will focus during 1986 on developing a national and international consensus on the nature and magnitude of the CFC problem. In 1987, EPA will announce a decision on the need for regulatory actions to control CFCs.

Research by EPA and others indicates that health risks result from indoor exposure to air pollutants, as well as ambient exposures. Some of the risks associated with indoor air pollution may be substantial. EPA will examine how existing EPA programs can be adjusted to reduce total exposure to unhealthful air quality.

## Maintain Air Quality

EPA, States, and local agencies must protect the gains made in improving environmental quality. In 1987, EPA will continue to develop national, technology-based New Source Performance Standards (NSPSs) for all major source categories. Fifteen NSPSs will be promulgated. An additional four NSPSs will be proposed or under development.

In 1987, EPA will continue to give priority to improving the effectiveness of EPA and State compliance monitoring inspections. EPA will support application of the Model Surveillance Targeting Program, completed in 1986, to provide more systematic and efficient inspection programs. EPA will also continue to actively promote the integration of continuous emissions monitoring (CEM) into the continuous compliance program. During 1987, EPA will complete guidance for addressing malfunctions of control equipment and process operations.

In 1987, EPA will complete promulgation of SIPs to protect visibility in pristine areas of those 34 States that did not prepare their own plans.

## Continue Research to Support Regulatory Programs

In 1987, the Office of Research and Development will continue to provide the monitoring methods, air quality models, health and welfare assessments, and emission reduction technology evaluations required to review NAAQSs, promulgate NSPSs and NESHAPs, and develop SIPs.

Research to determine the atmospheric transport, transformation, and fate of air pollutants will continue, with increased emphasis on the formation of toxic air pollutants from initially innocuous compounds. In addition, studies will be done to determine the effects of particle soiling on buildings and materials.

The regulatory review schedule for NAAQSs requires a shift in emphasis in the scientific assessment program. In 1987, the focus will be on oxides of nitrogen, particulate matter, sulfur oxides, and carbon monoxide. In line with the Agency's program to regulate and control potentially toxic air pollutants, comprehensive health assessment documents for hazardous air pollutants will be provided.

The monitoring systems and quality assurance program will continue to provide monitoring data, develop and validate monitoring methods for air pollutants, and provide quality assurance support. The emphasis in 1987 will be on continued development of the Toxics Air Monitoring System and related toxic air pollution monitoring, and on developing and refining total human exposure measurement methods.

Health research on criteria air pollutants will continue to focus on developing test methods, producing dose/response data, and developing techniques to extrapolate animal data to humans. In keeping with the regulatory schedule, the emphasis will be on the effects of nitrogen dioxide and particulate matter. Increased effort will be directed to ascertaining the health effects of toxic air pollutants.

The environmental engineering and technology program will continue to assess the performance, cost, and reliability of emission reduction technologies and provide technical assistance to Regional Offices to support permitting, NSPSs, and compliance activities.

Research will be enhanced on the potential health and environmental effects of increased levels of ultraviolet radiation, particularly in the wavelength range of approximately 290-300 nanometers (UV-B radiation). UV-B radiation levels increase when stratospheric ozone layer is depleted. The adverse effects of air pollution on vegetation will be studied, as will the effects of particles on visibility.

# AIR

<u>PROGRAM ACTIVITIES</u>	<u>Actual 1985</u>	<u>Budget Estimate 1986</u>	<u>Current Estimate 1986</u>	<u>Estimate 1987</u>	<u>Increase (+) Decrease (-) 1987 vs. 1986</u>
<u>National Ambient Air Quality Standards</u>					
Number of Pollutants Covered (Cumulative).....	6	6	6	6	--
Proposals*.....	2	1	1	1	--
Promulgations*.....	0	2	2	0	+2
<u>New Source Performance Standards</u>					
Source Categories Covered (Cumulative).....	59	74	65	77	+12
Proposals**.....	3	6	14	1	-13
Promulgations**.....	11	12	10	15	+5
<u>National Emission Standards for Hazardous Air Pollutants</u>					
Number of Source Categories Covered (Cumulative).....	27	0	30	32	+2
Number of Pollutants Covered (Cumulative).....	5	6	6	7	+1
Proposals**.....	2	2	1	1	--
Promulgations**.....	0	3	5	2	-3
<u>Enforcement Actions -- Stationary Sources</u>					
Inspections.....	1,726	1,725	1,725	1,694	-31
Notices of Violations.....	247	200	230	238	+8
Administrative Orders.....	101	92	105	131	+26
Civil Litigation.....	135	167	117	121	+4
Criminal Litigation.....	13	6	14	14	--
<u>Enforcement Actions -- Mobile Sources</u>					
State and Local Tampering/Fuel Switching Programs (Cumulative). 19		32	28	37	+9
Assembly Line Testing.....					
Test Orders.....	17	17	21	21	--
Recall Investigations.....	35	40	35	20	-15
Notices of Violations					
° Tampering/Fuel Switching... 645		420	450	450	--
° Lead..... 6		32	32	50	+18

\* Revisions or reaffirmations

\*\* New Source categories and revisions (for example, the 5 NESHAPs promulgations in 1986 include 3 new source categories and 2 revisions)

\*\* Current estimates are based on revised criteria

NOTE: All outputs are incremental except as indicated.



# **Research and Development**



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## AIR

## Air Quality Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
Characterization, Transport And Fate - Air							
Salaries & Expenses	\$2,690.7	\$2,765.6	\$3,818.7	-\$164.3	\$3,654.4	\$3,753.1	\$98.7
Research & Development	\$6,384.1	\$6,629.4	\$7,847.5	-\$337.4	\$7,510.1	\$8,170.0	\$659.9
TOTAL	\$9,074.8	\$9,395.0	\$11,666.2	-\$501.7	\$11,164.5	\$11,923.1	\$758.6
Scientific Assessment - Air							
Salaries & Expenses	\$3,089.7	\$3,067.7	\$3,023.3	-\$129.9	\$2,893.4	\$2,801.1	-\$92.3
Research & Development	\$3,072.6	\$2,686.2	\$2,975.3	-\$127.9	\$2,847.4	\$2,538.0	-\$309.4
TOTAL	\$6,162.3	\$5,753.9	\$5,998.6	-\$257.8	\$5,740.8	\$5,339.1	-\$401.7
Monitoring Systems And Quality Assurance - Air							
Salaries & Expenses	\$6,360.3	\$6,321.0	\$6,184.3	-\$265.9	\$5,918.4	\$6,695.4	\$777.0
Research & Development	\$6,717.7	\$8,559.9	\$12,378.7	-\$532.3	\$11,846.4	\$10,702.0	-\$1,144.4
TOTAL	\$13,078.0	\$14,880.9	\$18,563.0	-\$798.2	\$17,764.8	\$17,397.4	-\$367.4
Health Effects - Air							
Salaries & Expenses	\$8,781.3	\$7,497.7	\$7,312.6	-\$314.4	\$6,998.2	\$8,204.6	\$1,206.4
Research & Development	\$15,147.9	\$14,583.4	\$14,852.0	-\$638.7	\$14,213.3	\$10,373.0	-\$3,840.3
TOTAL	\$23,929.2	\$22,081.1	\$22,164.6	-\$953.1	\$21,211.5	\$18,577.6	-\$2,633.9
Environmental Engineering And Technology - Air							
Salaries & Expenses	\$3,538.8	\$3,809.8	\$3,967.1	-\$170.5	\$3,796.6	\$3,940.0	\$143.4
Research & Development	\$4,897.7	\$4,459.5	\$6,101.4	-\$262.4	\$5,839.0	\$3,514.0	-\$2,325.0
TOTAL	\$8,436.5	\$8,269.3	\$10,068.5	-\$432.9	\$9,635.6	\$7,454.0	-\$2,181.6



# AIR

## Air Quality Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
Environmental Processes And Effects - Air							
Salaries & Expenses	\$1,713.8	\$1,777.3	\$853.3	-\$36.8	\$816.5	\$668.4	-\$148.1
Research & Development	\$3,157.6	\$3,013.2	\$1,346.6	-\$57.8	\$1,288.8	\$1,000.0	-\$288.8
TOTAL	\$4,871.4	\$4,790.5	\$2,199.9	-\$94.6	\$2,105.3	\$1,668.4	-\$436.9
Stratospheric Modification Program							
Salaries & Expenses	\$104.9						
Research & Development	\$699.8	\$900.0	\$837.8	-\$36.0	\$801.8	\$895.0	\$93.2
TOTAL	\$804.7	\$900.0	\$837.8	-\$36.0	\$801.8	\$895.0	\$93.2
TOTAL:							
Salaries & Expenses	\$26,279.5	\$25,239.1	\$25,159.3	-\$1,081.8	\$24,077.5	\$26,062.6	\$1,985.1
Research & Development	\$40,077.4	\$40,831.6	\$46,339.3	-\$1,992.5	\$44,346.8	\$37,192.0	-\$7,154.8
Air Quality Research TOTAL	\$66,356.9	\$66,070.7	\$71,498.6	-\$3,074.3	\$68,424.3	\$63,254.6	-\$5,169.7

## PERMANENT WORKYEARS

Characterization, Transport And Fate - Air	40.0	44.0	55.2		55.2	55.6	.4
Scientific Assessment - Air	50.1	48.3	52.9		52.9	53.7	.8
Monitoring Systems And Quality Assurance - Air	107.5	103.1	102.2		102.2	107.2	5.0
Health Effects - Air	106.5	115.5	130.6		130.6	118.6	-12.0

AIR

Air Quality Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
Environmental Engineering And Technology - Air	57.9	51.5	65.3		65.3	66.3	1.0
Environmental Processes And Effects - Air	22.9	21.7	7.7		7.7	7.3	-0.4
Stratospheric Modification Program	2.1						
TOTAL PERMANENT WORKYEARS	387.0	384.1	413.9		413.9	408.7	-5.2
TOTAL WORKYEARS							
Characterization, Transport And Fate - Air	47.4	46.5	61.7		61.7	61.7	
Scientific Assessment - Air	58.4	57.6	56.8		56.8	56.8	
Monitoring Systems And Quality Assurance - Air	115.8	119.7	118.2		118.2	123.2	5.0
Health Effects - Air	120.6	132.2	130.6		130.6	133.6	3.0
Environmental Engineering And Technology - Air	63.7	71.0	71.5		71.5	72.5	1.0

AIR

Air Quality Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
	(DOLLARS IN 'HOUSANDS)						
Environmental Processes And Effects - Air	28.8	27.9	12.3		12.3	12.3	
Stratospheric Modification Program	2.1						
TOTAL WORKYEARS	436.8	454.9	451.1		451.1	460.1	9.0

AIR

Air Quality Research

Principal Outputs by Objective

1987 PLANNED OUTPUTS

Objective 1: Provide Scientific Support to Develop and Review Primary and Secondary NAAQS

- o Journal article on the dosimetry of selected fine mode particles in human and animal lungs (Health)
- o External review drafts of Air Quality Criteria Document (AQCD) for carbon monoxide and oxides of nitrogen (Sci. Assessment)

Objective 2: Provide Scientific Support to Develop NSPS and SIPs

- o Users guide for evaluating complex terrain model for stable plume impaction (Charact. & Transport)
- o Report on reference and equivalent methods program for 1986 (Monitoring)

Objective 3: Provide Scientific Support to Develop Regulations for Hazardous Air Pollutants

- o Five comprehensive Health Assessment Documents (Sci. Assessment)
- o Status reports on the Baltimore and California Total Exposure Assessment Methodology (TEAM) studies (Monitoring)

Objective 4: Provide Scientific Support to the Mobile Source Regulatory Program

- o Article on the impact of methanol fuels on evaporative emissions (Charact. & Transport)
- o Status report on population exposure research activities, including exposure models (Monitoring)

Objective 5: Provide Scientific Data to Determine the Impact of the Quality of Global and Micro-environments on Public Health and the Environment

- o Final report on evaluation of the effectiveness of residential radon mitigation for building code officials, home builders and homeowners (Env. Technology)

1986 PLANNED OUTPUTS

Objective 1: Provide Scientific Support to Develop and Review Primary and Secondary NAAQS

- o Final AQCDs for ozone and lead (Sci. Assessment)
- o Annual report on Inhalable Particulate Network (Monitoring)
- o Journal article on model of regional uptake of O<sub>3</sub> and NO<sub>2</sub> in the lungs (Health)

Objective 2: Provide Scientific Support to Develop NSPS and SIPs

- o Users guide for model using new dispersion techniques (Charact. & Transport)
- o Final report on pilot scale cement kiln test to evaluate applications of NO<sub>x</sub> control combustion modification (Env. Technology)

Objective 3: Provide Scientific Support to Develop Regulations for Hazardous Air Pollutants

- o Six comprehensive Health Assessment Documents (Sci. Assessment)
- o Draft final report on residential wood combustion emission laboratory measurements from Phase I Integrated Air Cancer Field Study (Env. Technology)

Objective 4: Provide Scientific Support to the Mobile Source Regulatory Program

- o Article on the emission rates of mutagenic gasoline hydrocarbons (Charact. & Transport)
- o Journal article on low level effects of CO on exercising angina patients (Health)

Objective 5: Provide Scientific Data to Determine the Impact of the Quality of Global and Micro-environments on Public Health and the Environment

- o Report of multipollutant field survey pilot study for indoor air quality (Monitoring)
- o Peer reviewed manual for homeowners on low cost radon mitigation techniques (Env. Technology)
- o Journal article on dose response of wheat yield to UV-B radiation simulating 0-15% stratospheric ozone depletion (Strat. Mod.)

1985 ACTUAL OUTPUTS

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Objective 1: Provide Scientific Support to Develop and Review Primary and Secondary NAAQS

- o Final report on a five year study of air quality (Monitoring)
- o Report on effects of NO<sub>2</sub> in exercising asthmatics (Health)

Objective 2: Provide Scientific Support to Develop NSPS and SIPs

- o Project report and summary: The Evaluation of Chemical Mechanisms for Photochemical Smog (Charact. & Transport)
- o Final report on the National Air Pollution Background Network (Monitoring)

Objective 3: Provide Scientific Support to Develop Regulations for Hazardous Air Pollutants

- o Report on the atmospheric reaction products from HAP degradation (Charact. & Transport)
- o Seventeen comprehensive Health Effects Documents (Sci. Assessment)
- o Final report on source emissions of copper compounds for NESHA development (Env. Technology)

Objective 4: Provide Scientific Support to the Mobile Source Regulatory Program

- o Journal article on real time measurements for CO characterization of in-use three-way catalyst vehicles (Charact. & Transport)
- o Journal article on "Measuring Human Exposure to Carbon Monoxide in Washington, D.C., and Denver, Colorado." (Monitoring)

Objective 5: Provide Scientific Data to Determine the Impact of the Quality of Global and Micro-environments on Public Health and the Environment

- o Proceedings of workshop on state of the art emission characterization for Indoor Air Quality Committee (Env. Technology)
- o Journal article on the response of estuarine diatom assemblages to UV-B radiation (Strat. Mod.)

## AIR

### Air Quality Research

#### Budget Request

The Agency requests a total of \$63,254,600 supported by 460.1 total workyears for 1987, a decrease of \$5,169,700 and an increase of 9.0 total workyears from 1986. Of the request, \$26,062,600 will be for the Salaries and Expenses appropriation and \$37,192,000 will be for the Research and Development appropriation, an increase of \$1,985,100 and a decrease of \$7,154,800, respectively.

#### Program Description

This research program provides the technical support needed to issue and enforce regulations implementing the Clean Air Act, including national standards for "criteria" pollutants and for hazardous air pollutants (HAPs) from a variety of sources. The following objectives support these efforts:

Objective 1. Provide Scientific Support to Develop and Review Primary and Secondary NAAQS. This research program provides the scientific data needed to issue and revise national standards for emissions of criteria pollutants.

Objective 2. Provide Scientific Support to Develop NSPS and SIPs. This research supports issuance and revision of New Source Performance Standards (NSPS) and State Implementation Plans (SIPs) through development of models and monitoring techniques for air pollutants and engineering studies of control technologies.

Objective 3. Provide Scientific Support to Develop Regulations for Hazardous Air Pollutants. Under this objective EPA conducts research to identify and control emissions of air pollutants from a variety of sources that are hazardous to human health but not already regulated as criteria pollutants.

Objective 4. Provide Scientific Support for the Mobile Source Regulatory Program. This research evaluates the health effects of, and monitoring techniques for, air pollutant emissions from mobile sources.

Objective 5. Provide Scientific Data to Determine the Impact of the Quality of Global and Micro-environments on Public Health and the Environment. This program supports research on global environmental problems such as atmospheric changes and the effects of ultraviolet radiation. Indoor air research is also conducted under this objective.

#### CHARACTERIZATION, TRANSPORT AND FATE

#### 1987 Program Request

The Agency requests a total of \$11,923,100 supported by 61.7 total workyears for this program, of which \$3,753,100 will be for the Salaries and Expenses appropriation and \$8,170,000 will be for the Research and Development appropriation. This represents an increase of \$98,700 and \$659,900, respectively, and no change in total workyears. The increase in Salaries and Expenses reflects adjustments to the 1986 base as part of government-wide deficit reductions. The increase in Research and Development reflects increased emphasis on hazardous air pollution research.

Provide Scientific Support to Develop and Review Primary and Secondary NAAQS. Research will be conducted to assess the influence of particle size and composition on soiling and visibility. A two-year study of the influence of fine and coarse mode particle soiling on glass and paint will be completed. Research to assess the sources of visibility impairment will continue, and field studies will continue to be conducted to determine the contribution of various types of fine particles to visibility reduction, and to identify the sources of these particles.

Provide Scientific Support to Develop NSPS and SIPs. A variety of models are being developed to support NSPS and SIPs. Models to predict chemical and physical reactions in the atmosphere are being developed at the urban and regional scale and for complex terrain to support development of effective control strategies for SIPs. Studies to adapt O<sub>3</sub> regional scale models for use in secondary standards will be conducted. A regional fine particulate/inhalable particulate model will be developed.

Provide Scientific Support to Develop Regulations for Hazardous Air Pollutants. With the use of specially designed smog chambers, research will be conducted to determine pollutant lifetimes and their atmospheric transformation products to support the Agency's air toxics strategy. Also, studies will be conducted to characterize evaporative and exhaust emissions from mobile sources. New studies will be initiated to determine the extent to which hazardous air pollutants are produced in the ambient air from pollutants that were originally less harmful. As part of the Integrated Air Cancer Program (IACP), studies will be done to determine the carcinogenic and mutagenic potential of air sheds containing wood combustion emissions. Field studies will be undertaken to measure human exposures to toxic air pollutants. In addition, technical assistance to the Regions and States on air toxics problems will be expanded.

Provide Scientific Support to the Mobile Source Regulatory Program. Research on the impact of low ambient temperature on the emission rates of air pollutants from light duty motor vehicles will continue. The effects on evaporative emissions of alternative fuels and different fuel compositions during vehicle refueling will be studied. Research to evaluate the impact of heavy duty diesel particulate control devices on emission rates and chemical composition will be initiated.

#### 1986 Program

In 1986, the Agency is allocating a total of \$11,164,500 supported by 61.7 total workyears for this program, of which \$3,654,400 is from the Salaries and Expenses appropriation and \$7,510,100 is from the Research and Development appropriation.

In 1986 the program reflects increased emphasis on HAPs. A report is in preparation on the identification, screening, and measurement of HAP concentrations in ambient air. An article is in progress on the recommended parameters to be used in visibility models. Improved O<sub>3</sub> chemistry mechanisms are being developed for incorporation into air quality simulation models.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$9,074,800 supported by 47.4 total workyears for this program, of which \$2,690,700 was from the Salaries and Expenses appropriation and \$6,384,100 was from the Research and Development appropriation.

In 1985, improved O<sub>3</sub> and NO<sub>2</sub> chemical mechanisms for urban scale O<sub>3</sub> modeling were developed. Also, a report was published on the atmospheric reaction products from HAP degradation.

## SCIENTIFIC ASSESSMENT

### 1987 Budget Request

The Agency requests a total of \$5,339,100 supported by 56.8 total workyears for this program, of which \$2,801,100 will be for the Salaries and Expenses appropriation and \$2,538,000 will be for the Research and Development appropriation. This represents a decrease of \$92,300 and \$309,400, respectively, and no change in total workyears. These reductions reflect the Agency's success in diminishing the backlog of Health Assessment Documents.

Provide Scientific Support to Develop and Review Primary and Secondary NAAQS. During 1987, external review draft air quality criteria documents (AQCD) will be published for oxides of nitrogen and carbon monoxide. Following promulgation of the NAAQS, the Agency will also begin to assess the health and welfare effects data that have become available since the last revision of the AQCD on particulate matter and sulfur oxides. In addition, technical analyses will be prepared for the Office of Air and Radiation to support their proposal and promulgation of revised NAAQS for lead and ozone.

Provide Scientific Support to Develop Regulations for Hazardous Air Pollutants. Five comprehensive health assessment documents and eight Tier I Health Effects Summaries will be completed in accordance with the Agency regulatory schedule. Eight additional Tier I documents will be initiated. In addition, toxic air pollution assessments for mobile sources emissions and technical assessments in support of State and regional air toxics problems will be provided.

### 1986 Program

In 1986, the Agency is allocating a total of \$5,740,800 supported by 56.8 total workyears for this program, of which \$2,893,400 is from the Salaries and Expenses appropriation and \$2,847,400 is from the Research and Development appropriation.

In 1986, the final AQCDs for lead and ozone are being prepared. Fourteen Tier I documents are in the process of being completed and eight more are being initiated. In addition, six comprehensive health assessment documents or external review drafts are expected to be completed.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$6,162,300 supported by 58.4 total workyears for this program, of which \$3,089,700 was from the Salaries and Expenses appropriation and \$3,072,600 was from the Research and Development appropriation.

During 1985, the first external review draft (ERD) of the AQCD for ozone was modified to respond to comments by the Science Advisory Board and the second ERD of the lead AQCD was published. Four Tier I documents and seventeen health assessment documents were provided. Work progressed on fourteen Tier I summaries.

## MONITORING SYSTEMS AND QUALITY ASSURANCE

### 1987 Budget Request

The Agency requests a total of \$17,397,400 supported by 123.2 total workyears for this program, of which \$6,695,400 will be for the Salaries and Expenses appropriation and \$10,702,000 will be for the Research and Development appropriation. This represents an increase of \$777,000 and a decrease of \$1,144,400, respectively, and an increase of 5.0 total workyears. The increase in Salaries and Expenses and total workyears reflects greater emphasis on Total Exposure Assessment Methodology (TEAM) and hazardous air pollution research, both of which are conducted in-house.



The decrease in Research and Development reflects the fact that research over a number of years has resulted in a considerable body of knowledge on criteria air pollutants, enabling the Agency to reduce the overall level of resources in this area. However, EPA will continue to perform the research necessary to review and revise the ambient air quality standards.

Provide Scientific Support to Develop and Review Primary and Secondary NAAQS. Existing air monitoring systems will be evaluated, improved, and standardized, with emphasis on non-methane organic compounds (NMOCs) and fine particulates. In 1987, an automated cryogenic NMOC monitor will be field tested. Research will also be performed to develop methods for measuring human exposure to criteria pollutants.

Provide Scientific Support to Develop NSPS and SIPs. The precision and accuracy of monitoring methods for measuring criteria air pollutant emissions from stationary sources will be evaluated and improved. Emphasis will be placed on developing a sampling method for PM-10. Reference and equivalent methods will be prepared as appropriate. Quality assurance support will be provided.

Provide Scientific Support to Develop Regulations for Hazardous Air Pollutants. Research to develop, evaluate and standardize monitoring systems for potentially hazardous air pollutants will be accelerated. Ambient methods such as combined mass spectrometry and supercritical fluid chromatography will be evaluated. Additional technical assistance will be provided to the Regions and States. The TEAM will be utilized in the field to assess the human exposures to toxic air pollutants. As part of the IACP, emission rates of carcinogenic and tracer substances will be assessed.

Provide Scientific Support to the Mobile Source Regulatory Program. Evaluation of data collected in previous field studies measuring population exposures to mobile source pollutants will continue. Using these data as reference inputs, improvements will be made to existing human exposure models. Emphasis will be placed on the sensitivity of these models to changes in input parameters and their resulting accuracy.

Provide Scientific Data to Determine the Impact of the Quality of Global and Micro-environments on Public Health and the Environment. Monitoring techniques will be utilized in field studies to measure human exposure to major indoor air pollutants such as radon, NO<sub>2</sub>, inhalable particulates, and VOCs. Predictive exposure models will be constructed and evaluated. Emissions from indoor combustion sources, construction materials and consumer products will be characterized so that predictive models of indoor air concentrations of the emitted substances can be developed.

#### 1986 Program

In 1986, the Agency is allocating a total of \$17,764,800 supported by 118.2 total workyears for this program, of which \$5,918,400 is from the Salaries and Expenses appropriation and \$11,846,400 is from the Research and Development appropriation.

In 1986, the program is aimed at the completion of reports on the inhalable particulate network, evaluation of PM-10 regulatory impacts and PM-10 systems evaluations, and an interim report on the status of the visibility network. Research on passive HAP monitors is being expanded. The fuels and additives registry is being continued. Audits of the State and Local Air Monitoring Systems (SLAMS) network are being performed and efforts are being made to improve the accuracy of human exposure models.

## 1985 Accomplishments

In 1985, the Agency obligated a total of \$13,078,000 supported by 115.8 total workyears for this program, of which \$6,360,300 was from the Salaries and Expenses appropriation and \$6,717,700 was from the Research and Development appropriation.

A final report was submitted on the validation of a manual test method for determination of CO emissions. The results of the five-year air quality study by the Stanford Institute of Mathematics and Statistics were published. Five techniques for monitoring hard-to-quantify toxic chemicals were evaluated. Articles were published on the Denver and Washington, D.C. human exposure field studies.

## HEALTH EFFECTS

### 1987 Program Request

The Agency requests a total of \$18,577,600 supported by 133.6 total workyears for this program, of which \$8,204,600 will be for the Salaries and Expenses appropriation and \$10,373,000 will be for the Research and Development appropriation. This represents an increase of \$1,206,400 and a decrease of \$3,840,300, respectively, and an increase of 3.0 total workyears. The increase in Salaries and Expenses and workyears reflects enhanced support for the in-house research program and the initiation of studies on indoor air and air toxics. The decrease in Research and Development is due primarily to a reduction of EPA funding for extramural studies on the health effects of criteria pollutants and mobile source emissions. These studies have been conducted for a number of years and have yielded sufficient information to support NAAQS and mobile source standards.

Provide Scientific Support to Develop and Review Primary and Secondary NAAQS. To support the timely revision of criteria documents, human and animal studies will be conducted to assess the effects of both acute and chronic exposures to criteria pollutants. Research will continue on models of respiratory tract deposition and pollutant uptake to enhance the development of extrapolation models. Studies will continue on the respiratory, biochemical, and immunological effects of O<sub>3</sub>, SO<sub>2</sub>, and particles. The neurobehavioral effects of CO will also be studied. Additional epidemiological studies will be performed to assess the effects of exposure to coal and wood smoke.

Provide Scientific Support to Develop Regulations for Hazardous Air Pollutants. In accordance with the Agency's Air Toxics Strategy, biological test methods will continue to be developed to more rapidly identify those airborne toxics with the greatest potential health risks. Dose-response studies will be conducted to assess the genetic, neurologic, pulmonary, physiological, carcinogenic and mutagenic effects of exposure to potentially hazardous air pollutants. Increased emphasis will be placed on the effects of acute exposures. As part of the IACP, human exposure to atmospheric carcinogens will be evaluated. In addition, genotoxic tier bioassays will be expanded so that the mutagenic, carcinogenic and teratogenic effects of vapor phase mixtures can be assessed. Technical assistance for the Regions and States on air toxics problems will be expanded.

Provide Scientific Data to Determine the Impact of the Quality of Global and Micro-environments on Public Health and the Environment. In conjunction with field studies conducted on major indoor air pollutants, the physiological and biological changes associated with exposure to these indoor pollutants will be evaluated.

### 1986 Program

In 1986, the Agency is allocating a total of \$21,211,500 supported by 130.6 total workyears for this program, of which \$6,998,200 is from the Salaries and Expenses appropriation and \$14,213,300 is from the Research and Development appropriation.

The 1986 program reflects a reduction in the need for mobile source health effects studies. Resources are being shifted in 1986 from mobile source research to give increased emphasis to determining the health effects associated with toxic air pollutants and other non-criteria compounds.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$23,929,200 supported by 120.6 total workyears for this program, of which \$8,781,300 was from the Salaries and Expenses appropriation and \$15,147,900 was from the Research and Development appropriation.

Two clinical studies of pulmonary and immunological effects of oxidants were completed that corroborate previous findings in animals. Epidemiology and toxicology studies of lead were completed, indicating that lead can cause neurobehavioral effects at much lower levels than previously expected.

#### ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

##### 1987 Program Request

The Agency requests a total of \$7,454,000 supported by 72.5 total workyears for this program, of which \$3,940,000 will be for the Salaries and Expenses appropriation and \$3,514,000 will be for the Research and Development appropriation. This represents an increase of \$143,400 and a decrease of \$2,325,000, respectively, and an increase of 1.0 total workyear. The increase in Salaries and Expenses and workyears reflects enhanced support for the in-house research program. The reduction in Research and Development reflects a decreased need for control technology and engineering research on criteria pollutants, resulting from the completion of EPA studies supported in prior years.

Provide Scientific Support to Develop NSPS and SIPs. To assist in regulating criteria air pollutants, engineering research will continue to characterize emission sources, and evaluate the cost-effectiveness, reliability and performance of controls. Within the criteria research program for environmental technology, emphasis will shift from nitrogen oxides to research on ozone precursor formation, such as VOCs. Evaluations of generic control technology and industry-specific studies will be conducted on VOC emissions. NO<sub>x</sub> research will evaluate the applicability of combustion modification techniques to industrial and utility boilers. Development will continue on an interactive electrostatic precipitator model for use in controlling particulate matter. For SO<sub>x</sub>, pilot tests of conventional spray drying for utility and industrial boilers will continue.

Provide Scientific Support to Develop Regulations for Hazardous Air Pollutants. Efforts to evaluate generic and industry-specific control technologies for high priority sources of potentially hazardous air pollutants will continue. Evaluations of wood stove catalytic converters will be continued. In accordance with the Agency's air toxics strategy, increased emphasis will be placed on assessing the performance of control technologies during periodic upsets, malfunctions and process changes. Additional technical assistance will be provided to the Regions and States on air toxics problems. In support of the IACP, engineering research will be continued on the development and assessment of methods for measuring emissions from wood combustion.

Provide Scientific Data to Determine the Impact of the Quality of Global and Micro-environments on Public Health and the Environment. As part of the Agency's National Radon Mitigation Strategy, techniques developed in 1986 will be further tested and refined in 1987. An evaluation of emissions from indoor combustion sources and construction materials will be continued to assess indoor air concentrations of these emitted substances.

### 1986 Program

In 1986, the Agency is allocating a total of \$9,635,600 supported by 71.5 total workyears for this program, of which \$3,796,600 is from the Salaries and Expenses appropriation and \$5,839,000 is from the Research and Development appropriation. The 1986 program includes the initiation of a national radon mitigation strategy and expansion of the Agency's air toxics program.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$8,436,500 supported by 63.7 total workyears for this program, of which \$3,538,800 was from the Salaries and Expenses appropriation and \$4,897,700 was from the Research and Development appropriation.

Pilot scale testing with fuel oil resulted in using reburning techniques for up to a 75% reduction in NO<sub>x</sub> levels. An analysis of HAP emission sources was conducted for the Office of Air and Radiation. Phase I of the radon mitigation program in the Reading Prong was completed, with radon reduction averaging 80% and above in several homes.

### ENVIRONMENTAL PROCESSES AND EFFECTS

#### 1987 Program Request

The Agency requests a total of \$1,668,400 supported by 12.3 total workyears for this program, of which \$668,400 will be for the Salaries and Expenses appropriation and \$1,000,000 will be for the Research and Development appropriation. This represents a decrease of \$148,100 and \$288,800, respectively, and no change in total workyears. These reductions reflect the completion of earlier studies on criteria air pollutants, resulting in a reduced need for research to support revisions to national air quality standards.

Provide Scientific Support to Develop and Review Primary and Secondary NAAQS. To support the review of secondary standards for ozone, research is being conducted to assess the importance of interactions between varying soil moisture levels and O<sub>3</sub> exposure fluctuations on growth and yield responses in major crops. Research to determine the effects of O<sub>3</sub> on crops as influenced by soil moisture stress will continue at several geographical sites, and the results will be incorporated in the economic assessment crop loss models.

### 1986 Program

In 1986, the Agency is allocating a total of \$2,105,300 supported by 12.3 total workyears for this program, of which \$816,500 is from the Salaries and Expenses appropriation and \$1,288,800 is from the Research and Development appropriation.

In 1986, data collection is being completed and statistical analysis is being initiated for the National Crop Loss Assessment Network (NCLAN).

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$4,871,400 supported by 28.8 total workyears for this program, of which \$1,713,800 was from the Salaries and Expenses appropriation and \$3,157,600 was from the Research and Development appropriation.

In 1985, the Annual Report on NCLAN activities was prepared.

## STRATOSPHERIC MODIFICATION

### 1987 Program Request

The Agency requests a total of \$895,000 for this program, all of which is for the Research and Development appropriation. This represents an increase of \$93,200 in Research and Development funds, reflecting an increased emphasis on research pertaining to the effects of UV-B radiation on health and welfare.

Provide Scientific Data to Determine the Impact of the Quality of Global and Micro-environments on Public Health and the Environment. In response to increased emphasis on the global impacts of pollution, efforts to assess the health and environmental effects of UV-B radiation will be continued. Studies will be conducted to better quantify UV-B effects on marine and terrestrial ecosystem components after completion of similar studies on several major crops. Work will continue on health effects and on various control approaches for use in potential regulatory actions.

### 1986 Program

In 1986, the Agency is allocating a total of \$801,800 for this program, all of which is from the Research and Development appropriation.

Studies are being initiated to determine the effects of UV-B radiation on human health and welfare, with emphasis on the effect of UV-B on wheat and other crops.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$804,700 supported by 2.1 total workyears for this program, of which \$104,900 was from the Salaries and Expenses appropriation and \$699,800 was from the Research and Development appropriation.

A journal article was published on the response of estuarine diatom assemblages to UV-B radiation.



# **Abatement and Control**





ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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## AIR

## Air Quality &amp; Stationary Source Planning &amp; Standards

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
-----								
(DOLLARS IN THOUSANDS)								
-----								
PROGRAM								
-----								
Emission Standards & Technology Assessment								
Salaries & Expenses	\$4,690.1	\$4,624.4	\$5,898.1	-\$253.5	\$5,644.6	\$5,101.5	-\$543.1	
Abatement Control and Compliance	\$7,229.1	\$7,597.3	\$10,797.3	-\$464.3	\$10,333.0	\$8,243.3	-\$2,089.7	
TOTAL	\$11,919.2	\$12,221.7	\$16,695.4	-\$717.8	\$15,977.6	\$13,344.8	-\$2,632.8	
Pollutant Strategies & Air Standards Development								
Salaries & Expenses	\$3,864.1	\$3,920.0	\$5,610.9	-\$241.4	\$5,369.5	\$4,164.4	-\$1,205.1	
Abatement Control and Compliance	\$2,824.4	\$2,377.0	\$2,377.0	-\$102.2	\$2,274.8	\$3,107.0	\$832.2	
TOTAL	\$6,688.5	\$6,306.0	\$7,987.9	-\$343.6	\$7,644.3	\$7,271.4	-\$372.9	
State Program Policy Guidelines & Regulations Development								
Salaries & Expenses	\$2,187.0	\$2,265.4	\$2,265.4	-\$97.5	\$2,167.9	\$2,265.4	\$97.5	
Abatement Control and Compliance	\$423.6	\$524.5	\$524.5	-\$22.5	\$502.0	\$505.7	\$3.7	
TOTAL	\$2,610.6	\$2,789.9	\$2,789.9	-\$120.0	\$2,669.9	\$2,771.1	\$101.2	
TOTAL:								
Salaries & Expenses	\$10,741.2	\$10,818.8	\$13,774.4	-\$592.4	\$13,182.0	\$11,531.3	-\$1,650.7	
Abatement Control and Compliance	\$10,477.1	\$10,498.8	\$13,698.8	-\$589.0	\$13,109.8	\$11,856.0	-\$1,253.8	
Air Quality & Stationary Source Planning & Standards	TOTAL	\$21,218.3	\$21,317.6	\$27,473.2	-\$1,181.4	\$26,291.8	\$23,387.3	-\$2,904.5

# AIR

## Air Quality & Stationary Source Planning & Standards

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
PERMANENT WORKYEARS							
Emission Standards & Technology Assessment	94.2	89.7	128.7		128.7	98.7	-30.0
Pollutant Strategies & Air Standards Development	74.6	81.8	98.8		98.8	87.8	-11.0
State Program Policy Guidelines & Regulations Development	44.6	40.1	40.1		40.1	40.1	
TOTAL PERMANENT WORKYEARS	213.4	211.6	267.6		267.6	226.6	-41.0
TOTAL WORKYEARS							
Emission Standards & Technology Assessment	98.9	96.5	135.5		135.5	105.5	-30.0
Pollutant Strategies & Air Standards Development	80.3	85.4	102.4		102.4	91.4	-11.0
State Program Policy Guidelines & Regulations Development	47.6	45.9	45.9		45.9	45.9	
TOTAL WORKYEARS	226.8	227.8	283.8		283.8	242.8	-41.0

## AIR

### Air Quality and Stationary Source Planning and Standards

#### Budget Request

The Agency requests a total of \$23,387,300 supported by 242.8 total workyears for 1987, a decrease of \$2,904,500 and 41.0 total workyears from 1986. Of the request, \$11,531,300 will be for the Salaries and Expenses appropriation and \$11,856,000 will be for the Abatement, Control and Compliance appropriation, decreases of \$1,650,700 and \$1,253,800, respectively.

#### Program Description

The program areas under this subactivity include:

Emission Standards and Technology Assessment -- This program provides for the establishment, review, and revision of national emission standards for stationary sources under Sections 111 and 112 of the Clean Air Act. Section 111 requires EPA to establish New Source Performance Standards (NSPSs). Section 112 authorizes National Emission Standards for Hazardous Air Pollutants (NESHAPs).

NSPSs reflect the performance of the best control systems for reducing emissions. The standards are set taking into consideration technical feasibility, and cost, as well as economic, energy, and environmental impacts. The background information published as part of the process for setting NSPSs provides useful data to State agencies in defining best available control technology, when such determinations of appropriate control levels must be made under other sections of the Clean Air Act.

NESHAPs protect the public from pollutants that cause or contribute to air pollution that results in an increase in mortality or an increase in serious illness.

Pollutant Strategies and Air Standards Development -- The major activities of this program include: (1) regular review and revision, as appropriate, of all existing National Ambient Air Quality Standards (NAAQSs); (2) identification and assessment of potential hazardous air pollutants, including the determination as to the appropriateness of a listing under Section 112 of the Clean Air Act; and (3) the overall coordination, development, and review of air policies and strategies including work on emerging issues such as acid deposition and stratospheric ozone depletion.

State Program Policy Guidelines and Regulations Development -- This program includes: (1) development of guidelines and regulations that set forth requirements for air pollution control programs implemented by the States under the Clean Air Act; and (2) overview of the development and implementation of State and local air pollution control programs. The State and local programs provide for the attainment and maintenance of NAAQSs, prevention of significant deterioration of air quality in clean areas, and the protection of visibility in national parks and wilderness areas. The overview carried out under this program helps ensure consistency among EPA Regional Offices, States, and local agencies in carrying out the requirements of the Clean Air Act.

## EMISSION STANDARDS AND TECHNOLOGY ASSESSMENT

### 1987 Program Request

The Agency requests a total of \$13,344,800 supported by 105.5 total workyears for this program, of which \$5,101,500 will be for the Salaries and Expenses appropriation and \$8,243,300 will be for the Abatement, Control and Compliance appropriation. This represents decreases of \$543,100 and \$2,089,700, respectively, and 30.0 total workyears. These decreases reflect anticipated completion of a one year effort in FY 1986 to accelerate the NSPS process.

The major program emphasis in 1987 will be reducing emissions from sources of hazardous air pollutants. This includes source assessments to support section 112 listing decisions for potentially hazardous pollutants and development of NESHAPs. During 1987, NESHAPs promulgations include two new NESHAPs for benzene (coke oven by-product plants) and coke oven emissions (wet charging and topside leaks). A revised standard for asbestos (demolition and renovation) will be proposed. Continued NESHAPs work includes further development of new standards for sources of chromium, cadmium, butadiene, carbon tetrachloride, perchloroethylene, methylene chloride, chloroform, ethylene oxide, ethylene dichloride, trichloroethylene, and three new hazardous air pollutants for which decisions are expected in 1986. The program will also continue to provide implementation support to States as part of the Agency's air toxics strategy whereby decisions on the control of selected air pollutants will be made by individual States rather than through Federal NESHAPs.

In 1987, efforts are continuing to complete NSPSs for all source categories required by the Clean Air Act. Promulgations of 15 NSPSs (12 new standards; three revisions) covering 12 additional priority list source categories are scheduled in 1987. One new NSPS is scheduled for proposal. Developmental work will continue on three NSPSs.

### 1986 Program

In 1986, the Agency is allocating a total of \$15,977,600 supported by 135.5 total workyears to this program, of which \$5,644,600 is from the Salaries and Expenses appropriation and \$10,333,000 is from the Abatement, Control and Compliance appropriation.

In 1986, NSPS development is continuing. Proposals for 14 NSPSs (12 new standards; two revisions) and promulgation of 10 NSPSs (six new standards; four revisions) are scheduled for 1986 covering six additional priority list source categories. In addition, three NSPS reviews are being completed. Other activity includes the completion of auto surface coating and size-specific particulate matter (PM<sub>10</sub>) assessments and two Control Technology Documents (lead and volatile organic compounds) and work on the remaining NSPS source categories on the priority list.

Proposal of one NESHAP for coke oven emissions (wet charging and topside leaks) is scheduled in 1986. Five NESHAPs, one for arsenic glass manufacturing, one for low arsenic feedstock copper smelters, one for high arsenic feedstock copper smelters, and revisions to the NESHAPs for vinyl chloride and mercury are scheduled for promulgation. Source assessments for several compounds are also being completed to support listing decisions in 1986. Ongoing NESHAPs development includes standards for sources of chromium, asbestos, benzene (coke by-product plants), cadmium, butadiene, carbon tetrachloride, perchloroethylene, ethylene oxide, ethylene dichloride, trichloroethylene, methylene chloride, and chloroform. The program will also provide implementation support to States to ensure adequate control of selected toxic air pollutants/source categories.

## 1985 Accomplishments

In 1985, the Agency obligated a total of \$11,919,200 supported by 98.9 total workyears, of which \$4,690,100 was from the Salaries and Expenses appropriation and \$7,229,100 was from the Abatement, Control and Compliance appropriation. The contract resources were used to continue work related to setting NSPSs and NESHAPs.

In 1985, work continued on setting NSPSs for source categories on EPA's priority list. NSPS activity included: proposal of three NSPS revisions; promulgation of six new standards covering six additional priority list source categories; revisions to five NSPSs; and completion of three reviews of existing NSPSs. Also, a Control Technique Guideline was completed for air oxidation.

Work continued toward promulgation of NESHAPs for three sources of arsenic. Work also continued on NESHAPs proposals including coke ovens (wet charging and topside leaks), and revision to the NESHAPs for asbestos demolition and renovation. Revisions to the NESHAPs for mercury and vinyl chloride were proposed in 1985. Other NESHAPs activity included continuing standard development work on benzene (coke by-product plants), and new work on cadmium, chromium, butadiene, and carbon tetrachloride. In addition, source assessments for five chemical compounds were completed.

## POLLUTANT STRATEGIES AND AIR STANDARDS DEVELOPMENT

### 1987 Program Request

The Agency requests a total of \$7,271,400 supported by 91.4 total workyears for this program, of which \$4,164,400 will be for the Salaries and Expenses appropriation and \$3,107,000 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of \$1,205,100 and an increase of \$832,200 respectively, and a decrease of 11.0 total workyears. The additional contract funds will provide for guidance documents and workshops in support of the State air toxics programs. The decreases reflect a more streamlined approach to providing direct Federal support to State and local agencies.

Promulgation of a revised particulate matter NAAQS is planned for 1987. Also, in 1987, a NAAQS revision or reaffirmation for lead is planned to be proposed and a revised or reaffirmed NAAQS for sulfur dioxide is expected to be promulgated. The development of regulatory impact analyses for ozone will be completed and the development of a fine particle secondary NAAQS will be underway. The next round of reviews for carbon monoxide and nitrogen dioxide will begin. Regulatory decisions will be made for 8-12 potential hazardous pollutants. Involvement in air toxics activities will continue. This includes support for the implementation of the National Air Toxics Strategy, operation of the Air Toxics Clearinghouse to support State programs, conducting workshops, providing information on health, exposure and risk assessment, and support to ensure adequate control of localized air toxics problems that may not be suitable for a national regulatory program. Other activities include (1) continued analyses of acid rain policy and implementation issues; and (2) decisions on the actions needed to control chlorofluorocarbon (CFC) emissions.

### 1986 Program

In 1986, the Agency is allocating a total of \$7,644,300 supported by 102.4 total workyears for this program. Of this amount, \$5,369,500 is from the Salaries and Expenses appropriation and \$2,274,800 is from the Abatement, Control and Compliance appropriation.

Revision or reaffirmation of the NAAQS for sulfur dioxide is expected to be proposed in 1986. Reviews of the NAAQS for particulate matter, lead, and ozone are underway. Pollutant assessment activities are to result in regulatory decisions for 13 substances. Work is continuing on a number of other pollutants scheduled for regulatory decisions in 1987. Other activities include: implementation of the Air Toxics Clearinghouse; health, exposure, risk, and source prioritization support for the NESHAPs program; a report on nationally important candidates for the direct Federal regulatory program; and support to State and local programs on air toxics problems.

Work is continuing on acid rain policy and implementation issues and exploration of the magnitude of the CFC problem.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$6,688,500 supported by 80.3 total workyears, of which \$3,864,100 was from the Salaries and Expenses appropriation and \$2,824,400 was from the Abatement, Control, and Compliance appropriation.

Reviews of the NAAQSs for carbon monoxide and nitrogen dioxide were promulgated in 1985 and work was underway to propose appropriate revisions to the NAAQSs for sulfur dioxide, lead, and ozone. In addition, work continued toward final action on review of the NAAQS for particulate matter. In the pollutant assessment area, work continued on the health and risk assessment of potentially toxic air pollutants to determine the need for regulations. Listing decisions were published for 11 compounds in 1985. Other activities included the initiation of full operation of the Air Toxics Clearinghouse. In addition, the National Air Toxics Strategy was announced and initial implementation begun. Work continued on acid rain policy and implementation issues and a comprehensive CFC action strategy was developed and adopted.

#### STATE PROGRAM POLICY GUIDELINES AND REGULATIONS DEVELOPMENT

##### 1987 Program Request

The Agency requests a total of \$2,771,100 supported by 45.9 total workyears for this program, of which \$2,265,400 will be for the Salaries and Expenses appropriation and \$505,700 will be for the Abatement, Control and Compliance appropriation. This represents increases of \$97,500 and \$3,700, respectively, and no change in total workyears. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions.

In 1987, the program will continue to provide national direction, management, and assistance to the national air quality management effort. The program will also develop regulations, policies, and technical guidance to support the implementation of revised NAAQSs for lead and sulfur dioxide, as well as for a variety of other critical issues such as stack heights and PM<sub>10</sub>. Regulatory actions are expected to include promulgation of regulations associated with revised or reaffirmed NAAQSs for particulate matter and sulfur dioxide. Revised National Air Audit criteria will be provided to the Regions for their use in conducting State and local agency audits at the biennial frequency initiated in 1986. A national audit report will be published. Management of the new source review and prevention of significant deterioration programs will also continue. This will encompass technical analysis and support of litigation including promulgation of visibility Part II regulations and rulemaking on ship emissions. In addition, management of the State Implementation Plan (SIP) process will continue, together with the management and overview of the post 1982 attainment program and additional emphasis on areas not likely to meet the 1987 attainment date for ozone. The operation of the control strategies clearinghouse for volatile organic compounds will be continued. A program to provide implementation guidance of the multi-year air toxics plan will continue.

## 1986 Program

In 1986, the Agency is allocating a total of \$2,669,900 supported by 45.9 total workyears for this program, of which \$2,167,900 is from the Salaries and Expenses appropriation and \$502,000 is from the Abatement, Control and Compliance appropriation.

In 1986, regulations to implement SIP requirements for a revised or reaffirmed sulfur dioxide NAAQS are expected to be proposed. Program guidance, policy papers, and technical information are also being developed on a variety of issues including SIP revisions for post 1982/1987 attainment, sulfur dioxide, stack heights, PM<sub>10</sub> implementation, and visibility. The new source review program is continuing to provide permit assistance and litigation support. Other rulemaking activities include the proposal of visibility Part II and vessel emissions regulations and promulgation of fugitive emissions regulations and the listing of strip mines. Guidance and assistance is also being provided to the Regional Offices in SIP management. Technical analysis of volatile organic compound controls, particulates, sulfur dioxide, lead, and other critical issues is being provided. The National Air Audit System is being continued in order to provide effective evaluation and review of State air programs, with audits shifting from an annual to biennial frequency. Acid rain implementation options are being evaluated and guidance provided on selected issues. Guidance is being provided to improve State and local toxics program capability consistent with the national air toxics strategy.

## 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,610,600 supported by 47.6 total workyears for this program, of which \$2,187,000 was from the Salaries and Expenses appropriation and \$423,600 was from the Abatement, Control and Compliance appropriation.

National management and evaluation of all major SIP programs continued in 1985. Program guidance, policy papers, and technical information were developed on a variety of issues including post-1982/87 attainment, lead, PM<sub>10</sub>, and sulfur dioxide. Policy guidance and program assistance were continued for the areas that had been granted attainment date extensions for the ozone and carbon monoxide NAAQSs. Lead SIPs were developed in accordance with the schedule and requirements of the litigation settlement agreement. Rulemaking accomplishments included proposal of regulations to implement revised particulate matter NAAQSs; proposal and promulgation of stack heights regulations; proposal and promulgation of Part I visibility regulations; proposal of prevention of significant deterioration regulations listing strip mines; proposal of fugitive emissions rulemaking; and promulgation of regulations to resolve the Section 126 petitions. New source review program guidance was provided and the National Air Audit System was implemented for five program areas (air quality planning, new source review, compliance assurance, air monitoring, and vehicle inspection/maintenance). Revised National Air Audit criteria were developed and a national air audit report was prepared.



AIR

Mobile Source Air Pollution Control & Fuel Economy

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
-----								
(DOLLARS IN THOUSANDS)								
-----								
PROGRAM								
-----								
Emission Standards, Technical Assessment & Characterization								
Salaries & Expenses	\$3,512.2	\$3,592.3	\$3,804.5	-\$163.6	\$3,640.9	\$3,989.3	\$348.4	
Abatement Control and Compliance	\$2,009.3	\$2,817.6	\$4,217.6	-\$181.3	\$4,036.3	\$3,436.4	-\$599.9	
TOTAL	\$5,521.5	\$6,409.9	\$8,022.1	-\$344.9	\$7,677.2	\$7,425.7	-\$251.5	
Testing, Technical & Administrative Support								
Salaries & Expenses	\$5,408.2	\$4,885.3	\$4,926.6	-\$211.9	\$4,714.7	\$4,861.6	\$146.9	
Abatement Control and Compliance	\$900.0	\$900.0	\$900.0	-\$38.7	\$861.3	\$900.0	\$38.7	
TOTAL	\$6,308.2	\$5,785.3	\$5,826.6	-\$250.6	\$5,576.0	\$5,761.6	\$185.6	
Emissions & Fuel Economy Compliance								
Salaries & Expenses	\$1,640.7	\$1,600.8	\$1,633.3	-\$70.0	\$1,563.3	\$1,600.3	\$37.0	
Abatement Control and Compliance	\$35.0	\$35.0	\$35.0	-\$1.5	\$33.5	\$35.0	\$1.5	
TOTAL	\$1,675.7	\$1,635.8	\$1,668.3	-\$71.5	\$1,596.8	\$1,635.3	\$38.5	
TOTAL:								
Salaries & Expenses	\$10,561.1	\$10,078.4	\$10,364.4	-\$445.5	\$9,918.9	\$10,451.2	\$532.3	
Abatement Control and Compliance	\$2,944.3	\$3,752.6	\$5,152.6	-\$221.5	\$4,931.1	\$4,371.4	-\$559.7	
Mobile Source Air Pollution Control & Fuel Economy	TOTAL	\$13,505.4	\$13,831.0	\$15,517.0	-\$667.0	\$14,850.0	\$14,822.6	-\$27.4

AIR

Mobile Source Air Pollution Control & Fuel Economy

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
----- (DOLLARS IN THOUSANDS) -----							
PERMANENT WORKYEARS -----							
Emission Standards, Technical Assessment & Characterization	65.3	63.9	70.4		70.4	69.9	-0.5
Testing, Technical & Administrative Support	89.6	92.0	94.0		94.0	92.0	-2.0
Emissions & Fuel Economy Compliance	32.0	33.0	34.0		34.0	33.0	-1.0
TOTAL PERMANENT WORKYEARS	186.9	188.9	198.4		198.4	194.9	-3.5
TOTAL WORKYEARS -----							
Emission Standards, Technical Assessment & Characterization	71.8	71.9	78.4		78.4	77.9	-0.5
Testing, Technical & Administrative Support	93.1	93.6	95.6		95.6	93.6	-2.0
Emissions & Fuel Economy Compliance	33.0	33.3	34.3		34.3	33.3	-1.0
TOTAL WORKYEARS	197.9	198.8	208.3		208.3	204.8	-3.5

## Mobile Source Air Pollution Control and Fuel Economy

Budget Request

The Agency requests a total of \$14,822,600 supported by 204.8 total workyears for 1987, a decrease of \$27,400 and 3.5 total workyears from 1986. Of the request \$10,451,200 will be for the Salaries and Expenses appropriation and \$4,371,400 will be for the Abatement, Control and Compliance appropriation, an increase of \$532,300 and a decrease of \$559,700, respectively.

Program Description

This subactivity includes the following mobile source programs:

Emission Standards, Technical Assessment and Characterization -- This program provides the standards development and analysis required for the control of mobile source emissions, as required by the Clean Air Act. Work is also carried out to improve fuel economy testing procedures and evaluate fuel economy retrofit devices, as required by the Motor Vehicle Information and Cost Savings Act. This program is responsible for developing both light-duty vehicle and heavy-duty engine standards for the control of evaporative and exhaust emissions. Other major program activities include: characterization of toxic emissions, assessment of emissions control technology, technical assistance to the States for implementation of local control programs, assessment of actual emissions levels from in-use vehicles, analysis of the current and prospective impacts of motor vehicle emissions on air quality, and assessment of alternative fuels and technologies as a means of reducing air pollution from mobile sources.

Testing, Technical, and Administrative Support -- This program provides basic testing, technical, and administrative support to the mobile source operating programs of EPA.

Emissions and Fuel Economy Compliance -- This program implements the emissions certification and compliance requirements of the Clean Air Act and the fuel economy information and compliance requirements of the Motor Vehicle Information and Cost Savings Act. As part of this program, fuel economy information is made available to the consumer through the mile per gallon values published in the Gas Mileage Guide and on new vehicle labels.

EMISSION STANDARDS, TECHNICAL ASSESSMENT, AND CHARACTERIZATION1987 Program Request

The Agency requests a total of \$7,425,700 supported by 77.9 total workyears for this program, of which \$3,989,300 will be for the Salaries and Expenses appropriation and \$3,436,400 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$348,400 for the Salaries and Expenses appropriation, a decrease of \$599,900 in the Abatement, Control and Compliance appropriation and a decrease of 0.5 in total workyears. The increase reflects support for in-house activities related to diesel emissions control. The decreases reflect changes in developing controls for toxic air pollutants.

The standards program in 1987 will continue emphasis on controlling ozone precursors and air toxics. The regulatory program will concentrate on control of evaporative and refueling emissions, excess hydrocarbon (HC) emissions, formaldehyde, and particulates. An advance notice for modifying diesel fuel composition will be published. Accelerated work on the fuel and fuel additive test protocols will result in a notice by the end of 1987. With the implementation of lead phase-

down, additional work will focus on alternatives to leaded gasoline. Testing of in-use vehicles will continue to assess the emissions performance of the in-use fleet. Data from the testing will be used to refine air quality projections and update the mobile source emissions estimation program. Work will continue on heavy-duty diesel trap technology with the implementation of prototype trap regeneration systems and close monitoring of industry research efforts. Support to the development of State Implementation Plans (SIPs) will continue, especially with respect to Inspection/Maintenance (I/M) programs. A total of 15 formal audits and follow-ups of State and local I/M programs will be completed.

#### 1986 Program

In 1986, the Agency is allocating a total of \$7,677,200 supported by 78.4 total workyears for this program, of which \$3,640,900 is from the Salaries and Expenses appropriation and \$4,036,300 is from the Abatement, Control and Compliance appropriation.

During 1985, the standards for heavy-duty engine nitrogen oxides and particulate emissions were promulgated. Implementation of these technology forcing standards, which contribute to the control of air toxics, is requiring continued support during 1986 to help ensure the development of particulate traps. Work has been started to characterize formaldehyde emissions from catalyst-equipped vehicles. The persistence of a severe ozone problem in many parts of the country spurred activity to deal with the control of excess HC emissions. In addition to the work on evaporative emissions control during refueling which may result in proposing control alternatives, work has also begun on a strategy to control other excess evaporative HC emissions from motor vehicles. A study that may lead to a proposed rulemaking will be completed by the end of 1986. The program continues to provide implementation assistance and review of SIPs, particularly as they relate to I/M. In 1985 and 1986 a process of periodic I/M program audits has continued to assess the effectiveness of State and local I/M programs. Additional work focuses on the testing of in-use vehicles, including the evaluation of new technology vehicles. Characterization of emissions from vehicles powered by alternative fuels continues. Work also continues on a rulemaking which will establish standards and a test procedure for methanol fueled vehicles. Standards for these vehicles will be proposed in 1986. A systematic review of the heavy-duty standards for HC, carbon monoxide and particulate matter will be initiated in 1986 for potential revision in 1987 and beyond.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$5,521,500 supported by 71.8 total workyears, of which \$3,512,200 was from the Salaries and Expenses appropriation and \$2,009,300 was from the Abatement, Control and Compliance appropriation.

Standards development resulted in promulgation of technology forcing standards for heavy-duty engine emissions of particulates and nitrogen oxides. Efforts related to heavy-duty engine emissions also included preparation for implementation of standards for evaporative hydrocarbon emissions and standards for exhaust hydrocarbon and carbon monoxide emissions. Support was furnished to States for the I/M portions of SIPs. Audits were completed for 10 I/M programs. Two fuel economy retrofit devices were tested and evaluated.

#### TESTING, TECHNICAL AND ADMINISTRATIVE SUPPORT

##### 1987 Program Request

The Agency requests a total of \$5,761,600 supported by 93.6 total workyears for this program, of which \$4,861,600 will be for the Salaries and Expenses appropriation and \$900,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$146,900 in the Salaries and Expenses appropriation, an increase of \$38,700 in the Abatement, Control and Compliance appropriation and a decrease of 2.0 in total workyears. The decrease in total workyears reflect changes in support provided to the mobile testing program. The increase

in the Salaries and Expenses appropriation will fund higher personnel costs. The increase in the Abatement, Control and Compliance appropriation reflects adjustments to the 1986 base as part of government-wide deficit reductions.

This program will provide testing, technical, and administrative support to the operating programs of the Office of Mobile Sources at the EPA Motor Vehicle Emissions Laboratory (MVEL) located in Ann Arbor, Michigan. Approximately 1,000 tests will be performed on prototypes, 1,600 tests on in-use vehicles, and 100 tests on heavy-duty engines. Activities that will be supported include recall, tampering and fuel switching, standard setting, emissions characterization, technology assessment, fuel economy, in-use vehicle emissions assessment, and motor vehicle emission certification. The support that will be provided includes: automated data processing (ADP) timesharing services, laboratory data acquisition, and computer operations; testing of motor vehicles to measure emissions and fuel economy; quality control and correlation services for EPA and industry testing programs; maintenance and engineering design of emission testing equipment; and personnel, administrative, safety, and facilities support services. Testing and analysis of approximately 2,000 fuel samples collected for enforcement purposes will continue.

#### 1986 Program

In 1986, the Agency is allocating a total of \$5,576,000 supported by 95.6 total workyears for this program, of which \$4,714,700 is from the Salaries and Expenses appropriation and \$861,300 is from the Abatement, Control and Compliance appropriation. Testing and technical support activities now operate at a level where significant economies of scale can be obtained.

Testing support to the certification and fuel economy labeling and compliance program continues, with 1,000 tests scheduled for these purposes. An additional 1,840 tests of in-use light-duty vehicles at the MVEL support the following programs: recall, surveillance, tampering and fuel switching, and emission factor development. Testing also includes support for the heavy-duty engine emission factors and standard-setting program. Correlation programs ensure consistency among EPA and manufacturer test facilities. Personnel, facility support services, safety, ADP, and administrative management functions are provided for at the MVEL.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$6,308,200 supported by 93.1 total workyears for this program, of which \$5,408,200 was from the Salaries and Expenses appropriation and \$900,000 was from the Abatement, Control and Compliance appropriation.

During 1985, the program continued to increase testing and vehicle procurement at the MVEL. A total of 2,637 tests were performed at the laboratory during the year. Test results were used by all mobile source programs to support regulatory and enforcement activities.

#### EMISSIONS AND FUEL ECONOMY COMPLIANCE

##### 1987 Program Request

The Agency requests a total of \$1,635,300 supported by 33.3 workyears for this program, of which \$1,600,300 will be for the Salaries and Expenses appropriation and \$35,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$37,000 in the Salaries and Expenses appropriation, an increase of \$1,500 in the Abatement, Control and Compliance appropriation and a decrease of 1.0 in total workyears. The workyear decrease is related to reductions in work assessing the adequacy of certification requirements to ensure durable emission control systems. The increases reflect adjustments to the 1986 base as part of government-wide deficit reductions.

The emissions and fuel economy compliance program will continue to issue approximately 600 certificates of compliance during the year. Certification engineering review will continue to deter the production of vehicle designs not capable of meeting emission standards. Participation in the certification program by importers for resale is expected to continue to increase. The fuel economy information and compliance program will generate information for the Gas Mileage Guide, calculate fuel economy labels, and calculate each manufacturer's Corporate Average Fuel Economy (CAFE). The in-use technology assessment program will continue the examination of continuing durability of control technology at high mileage. The objective is to improve the effectiveness of the certification program in reducing high mileage in-use noncompliance.

#### 1986 Program

In 1986, the Agency is allocating a total of \$1,596,800 supported by 34.3 total workyears for this program, of which \$1,563,300 is from the Salaries and Expenses appropriation and \$33,500 is from the Abatement, Control and Compliance appropriation.

Approximately 600 certificates of compliance with emission standards will be issued. The Agency is continuing to streamline the certification process by revising requirements to reduce the burden on industry without sacrificing emissions reductions. Programs to assess the performance of high mileage in-use vehicles in order to develop improved ways to assure high-mileage compliance with standards are underway. The fuel economy program continues to generate 1,000 to 1,100 fuel economy labels a year, data for the Gas Mileage Guide, and 50 CAFE calculations.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,675,700 supported by 33.0 total workyears for this program, of which \$1,640,700 was from the Salaries and Expenses appropriation and \$35,000 was from the Abatement, Control and Compliance appropriation.

Certificates of compliance were issued for 592 engine families. The fuel economy program produced 1,151 fuel economy labels and performed 78 CAFE calculations. Increased effort was devoted to revise the fuel economy program to more closely approximate in-use results, improve the labeling data base, and reduce the manufacturers' reporting costs.

AIR

State Programs Resource Assistance

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
(DOLLARS IN THOUSANDS)								
PROGRAM								
-----								
Control Agency Resource Supplementation (Section 105 Grants)								
Abatement Control and Compliance	\$90,486.0	\$95,034.0	\$100,034.0	-\$4,301.5	\$95,732.5	\$95,000.0	-\$732.5	
TOTAL	\$90,486.0	\$95,034.0	\$100,034.0	-\$4,301.5	\$95,732.5	\$95,000.0	-\$732.5	
Training								
Salaries & Expenses	\$230.6	\$234.5	\$234.5	-\$10.2	\$224.3	\$234.5	\$10.2	
Abatement Control and Compliance	\$507.0		\$500.0	-\$21.5	\$478.5		-\$478.5	
TOTAL	\$737.6	\$234.5	\$734.5	-\$31.7	\$702.8	\$234.5	-\$468.3	
TOTAL:								
Salaries & Expenses	\$230.6	\$234.5	\$234.5	-\$10.2	\$224.3	\$234.5	\$10.2	
Abatement Control and Compliance	\$90,993.0	\$95,034.0	\$100,534.0	-\$4,323.0	\$96,211.0	\$95,000.0	-\$1,211.0	
State Programs Resource Assistance	TOTAL	\$91,223.6	\$95,268.5	\$100,768.5	-\$4,333.2	\$96,435.3	\$95,234.5	-\$1,200.8
PERMANENT WORKYEARS								
-----								
Training	4.0	4.0	4.0		4.0	4.0		
TOTAL PERMANENT WORKYEARS	4.0	4.0	4.0		4.0	4.0		

AIR

State Programs Resource Assistance

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
-----							
TOTAL WORKYEARS							
Training	4.0	4.0	4.0		4.0	4.0	
TOTAL WORKYEARS	4.0	4.0	4.0		4.0	4.0	



## AIR

### State Programs Resource Assistance

#### Budget Request

The Agency requests a total of \$95,234,500 supported by 4.0 total workyears for 1987, a decrease of \$1,200,800 and no change in total workyears from 1986. Of the request, \$234,500 will be for the Salaries and Expenses appropriation and \$95,000,000 will be for the Abatement, Control and Compliance appropriation, representing an increase of \$10,200 in the Salaries and Expense appropriation and a decrease of \$1,211,000 in the Abatement, Control and Compliance appropriation.

#### Program Description

This subactivity provides financial support to State and local air pollution control agencies, including air quality programs for Indian lands, for the prevention, abatement, and control of air pollution. The primary objective of this subactivity is to support the development and implementation of effective State and local programs for the attainment and maintenance of the National Ambient Air Quality Standards (NAAQSs), in accordance with provisions of the Clean Air Act.

Control Agency Resource Supplementation (Section 105 Grants) -- Direct grants to control agencies that have major roles in developing and carrying out programs under the Clean Air Act constitute the major form of EPA resource assistance. Direct grants are supplemented by the training of State and local air pollution control personnel and the provision of services of contractors for specific tasks identified by the States and localities. The grants support State and local activities which develop State Implementation Plans (SIPs) for the attainment and maintenance of the NAAQSs; enforce source emission regulations and requirements contained within the SIPs; review and permit new sources; monitor ambient air quality for assessing environmental quality and progress; and develop data bases necessary for regulatory decisions. In addition, these funds promote the assumption and implementation of other Clean Air Act responsibilities, including those for the prevention of significant deterioration (PSD), protection of visibility and the implementation of New Source Performance Standards (NSPSs) and National Emission Standards for Hazardous Air Pollutants (NESHAPs). Finally, these funds help control agencies to develop and enhance air toxics programs for assessing and mitigating exposures consistent with the recently published national strategy.

Training -- Traditionally, resource assistance is further supplemented by the provision of training in specialized areas of air pollution control. New courses are developed as needed, instruction manuals and materials are revised and updated, and manuals and instructional materials are provided to university training centers. The EPA staff works with university centers to develop State and local self-sufficiency in training by offering courses at area training centers.

#### CONTROL AGENCY RESOURCE SUPPLEMENTATION (SECTION 105 GRANTS)

##### 1987 Program Request

The Agency requests a total of \$95,000,000, all of which will be for the Abatement, Control and Compliance appropriation. This represents a decrease of \$732,500. This decrease reflects completion of the acid precipitation emissions inventory project.

This grant will be included in an anticipated legislative proposal for block grants designed to give States more flexibility and autonomy in administering environmental programs. In 1987, States are expected to continue to emphasize the following activities. States will implement inspection and source compliance programs, continuing to emphasize NESHAPs and Class B volatile organic compound (VOC) sources in nonattainment areas. States will maintain the National Air Monitoring System (NAMS) and State and Local Air Monitoring System (SLAMS) networks, replacing additional poor instruments and continuing necessary modifications to collect sizespecific particulate matter (PM<sub>10</sub>) data. States will initiate efforts for developing PM<sub>10</sub> SIPs in high probability nonattainment areas.

Implementation of the national air toxics strategy will continue to be a major priority for State and local air programs in 1987. State and local agencies will continue to implement their multiple-year plans, building and expanding air toxics programs consistent with the national strategy and EPA guidance. State and local agencies will continue to undertake initiatives to evaluate and mitigate exposures from high risk sources. Concerns about air toxics exposures in urban areas having multiple sources and pollutants will continue to grow. Programs to start evaluating and addressing these concerns will commence in several areas in 1987. States will initiate the first phase of a several year program to prepare comprehensive inventories and analyze exposure within complex geographic areas expected to have significant multiple source and pollutant interactions. Grant resources will also permit States to implement a comprehensive program in urban ozone nonattainment areas which are not anticipated to attain by 1987. Efforts to assess controls, adopt new and increasingly stringent control measures, and review the reductions achieved will ensure that effective progress in reducing VOC emissions continues in these areas. States will start to develop and implement the corrective and/or additional measures necessary to achieve major progress.

#### 1986 Program

In 1986, the Agency is allocating a total of \$95,732,500 for this program, all of which is from the Abatement, Control and Compliance appropriation.

In 1986, States are continuing to develop and implement the multiple regulatory programs necessary for the attainment of NAAQSs in areas missing the 1982 deadlines or having extensions to 1987. States are also preparing necessary corrections to the SIPs where State/EPA reviews of progress identify needed changes in attainment strategies or new nonattainment problems are documented. States are preparing data bases and analyses preparatory to the development of regulatory plans for PM<sub>10</sub> when the NAAQS is promulgated. Revisions to SIPs addressing EPA's revised stack height regulations are being developed. States are also assuming responsibility for newly promulgated NSPSs and NESHAPs.

States are continuing to fully operate and quality assure the NAMS/SLAMS networks. A number of the more seriously deteriorated network monitors for ozone and carbon monoxide are being replaced. States are continuing to modify existing networks to collect data necessary for regulatory decisions and the development of required PM<sub>10</sub> SIPs, including the purchase of additional monitoring equipment for determining PM<sub>10</sub> levels in probable nonattainment areas. Instrumentation is being purchased for conducting limited background visibility monitoring in key Class I areas as required by settlement of litigation against the Agency.

States are carrying out their inspection and source monitoring programs for assuring initial and continuous compliance by stationary sources, including the provision of timely and appropriate response to violations. Emphasis continues to focus on violating VOC sources and sources subject to NESHAPs, including enforcement of asbestos demolition and renovation requirements and inventories of Class B sources. Grant resources are also supporting the implementation of ongoing in-use vehicle regulatory programs and the development of a limited number of new programs in nonattainment areas.

State and local agencies are preparing multiple-year plans to build and enhance air toxics programs, consistent with the national air toxics strategy, and are initiating programs to implement these plans. They are also initiating steps to evaluate and mitigate exposures from certain high risk sources identified by EPA or the State.

Specific projects to analyze and develop data bases and improve State inventories as well as technical and institutional foundations for possible future acid rain control strategies are continuing.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$90,486,000 to this program, all of which was from the Abatement, Control and Compliance appropriation.

In 1985, air management efforts included analysis of the SIPs for areas missing the December 1982 NAAQS attainment deadline; development and adoption of additional regulations and programs in areas having extensions to 1987 for meeting the carbon monoxide and ozone NAAQSs; and continued development of overdue SIPs for lead.

States continued the operation and quality assurance of the NAMS and SLAMS networks. Selected States initiated programs to develop technical and institutional foundations for possible future acid rain control strategies, including improvement of data bases and evaluation of control options.

State compliance programs continued to focus efforts on assuring initial and continuous compliance by stationary sources through improved inspection techniques and continuous monitoring activities. Emphasis was placed on violating sources of VOCs and sources subject to NESHAPs. States also negotiated and implemented efforts to improve the Federal/State enforcement process described in their cooperative agreements with EPA in defining "timely and appropriate" response to violating sources.

#### TRAINING

##### 1987 Program Request

The Agency requests a total of \$234,500 supported by 4.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This request represents an increase of \$10,200 in the Salaries and Expenses appropriation and a decrease of \$478,500 in the Abatement, Control and Compliance appropriation. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. This decrease reflects the Agency's decision that States are capable of providing sufficient training in the basic aspects of air pollution control.

In 1987, EPA will continue to manage the self-study training program. Technical support will be provided to States and Regions planning workshops and training courses. In addition, existing courses will be updated using in-house skills.

##### 1986 Program

In 1986, the Agency is allocating a total of \$702,800 supported by 4.0 total workyears for this program. Of this request, \$224,300 is from the Salaries and Expenses appropriation and \$478,500 is from the Abatement, Control and Compliance appropriation.

Activities in 1986 include management of the self-study training program, technical support to States and Regions planning workshops and training courses, and updating of existing courses using in-house skills. Also, training courses will be offered in the six area training centers covering high demand subject areas and traineeships/ fellowships will be provided to selected control agency employees.

## 1985 Accomplishments

In 1985, the Agency obligated a total of \$737,600 supported by 4.0 total workyears for this program. Of the amount obligated, \$230,600 was from the Salaries and Expenses appropriation and \$507,000 was from the Abatement, Control and Compliance appropriation.

In 1985, a total of 43 training courses (28 regular scheduled courses and 15 special courses) were conducted covering 17 subject areas for 1007 students at six area training centers and in Regional areas. Graduate traineeships or fellowships were provided for 19 control agency employees. In addition, three new courses in the area of air toxics were prepared. Also, revised self-instructional correspondence and classroom courses were prepared and made available to 1130 students.

# AIR

## Air Quality Management Implementation

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
-----							
PROGRAM							
-----							
Air Quality Management Implementation							
Salaries & Expenses	\$10,852.4	\$11,780.8	\$12,145.2	-\$522.2	\$11,623.0	\$11,955.2	\$332.2
Abatement Control and Compliance	\$300.2	\$294.6	\$694.6	-\$29.9	\$664.7	\$294.6	-\$370.1
TOTAL	\$11,152.6	\$12,075.4	\$12,839.8	-\$552.1	\$12,287.7	\$12,249.8	-\$37.9
TOTAL:							
Salaries & Expenses	\$10,852.4	\$11,780.8	\$12,145.2	-\$522.2	\$11,623.0	\$11,955.2	\$332.2
Abatement Control and Compliance	\$300.2	\$294.6	\$694.6	-\$29.9	\$664.7	\$294.6	-\$370.1
Air Quality Management TOTAL Implementation	\$11,152.6	\$12,075.4	\$12,839.8	-\$552.1	\$12,287.7	\$12,249.8	-\$37.9
-----							
PERMANENT WORKYEARS							
-----							
Air Quality Management Implementation	263.7	275.2	281.0		281.0	275.0	-6.0
TOTAL PERMANENT WORKYEARS	263.7	275.2	281.0		281.0	275.0	-6.0

AIR

Air Quality Management Implementation

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
-----							
TOTAL WORKYEARS							
-----							
Air Quality Management Implementation	284.9	294.4	304.3		304.3	298.3	-6.0
TOTAL WORKYEARS	284.9	294.4	304.3		304.3	298.3	-6.0

## Air Quality Management Implementation

Budget Request

The Agency requests a total of \$12,249,800 supported by 298.3 total workyears for 1987, a decrease of \$37,900 and 6.0 total workyears. Of the request, \$11,955,200 will be for the Salaries and Expenses appropriation and \$294,600 will be for the Abatement, Control and Compliance appropriation, an increase of \$332,200 and a decrease of \$370,100, respectively.

Program Description

This subactivity provides resources for the operation and maintenance of an air quality management program in each of the Agency's ten Regional Offices. Under the Clean Air Act, the States have primary responsibility for preparing attainment strategies and meeting the commitments for the development and implementation of multiple regulatory programs essential to the attainment and maintenance of National Ambient Air Quality Standards (NAAQSs). State strategies and programs have to be revised when NAAQSs are modified, new standards established, or deficiencies within the strategies are identified. The Regional program, in partnership with State and local air pollution control agencies, has a major responsibility for implementing the requirements of the Clean Air Act and related EPA regulations governing the attainment and maintenance of the NAAQSs. The air management program provides policy guidance and technical consultation to States, helping them to prepare the strategies and regulatory programs. The program also conducts the necessary regulatory review and coordination for approval within the Federal Register of individual strategies and regulations in State Implementation Plans (SIPs) submitted to EPA. The program also plays the principal role in negotiating air quality program grants to State and local control agencies and auditing the progress and effectiveness of these agencies in developing, implementing, and enforcing regulatory programs. The program has major responsibilities for helping States develop and implement programs for assessing and mitigating air toxics exposures as required by the Agency's recently published national strategy.

AIR QUALITY MANAGEMENT IMPLEMENTATION1987 Program Request

The Agency requests a total of \$12,249,800 supported by 298.3 total workyears for this program, of which \$11,955,200 will be for the Salaries and Expenses appropriation and \$294,600 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$332,200 and a decrease of \$370,100, respectively, and a decrease of 6.0 total workyears. The increase reflects increased operation costs for the program. The decreases reflect completion of the guidance for tall stack and lead SIP revisions, as well as completion of sitespecific integrated environmental pilot studies carried out in 1986.

The Regional air management program will continue efforts to restore environmental quality, particularly the protection of public health within the remaining nonattainment areas. Nonattainment efforts will focus on the most severe ozone areas which have the largest sensitive populations. Toward this end, Regions will work with States to implement a comprehensive program within the major urban nonattainment areas experiencing violations of the ozone standard and not anticipated to attain by 1987. Aggressive efforts by EPA and the States during 1987 to assess controls, adopt new and increasingly stringent control measures, and review the reductions achieved will ensure that effective progress in reducing volatile organic compound (VOC) emissions continues in these areas. Support of State programs for regulating in-use vehicles will continue, reflecting the importance of these programs to the attainment of standards. Regions will guide and assist States in preparing SIPs for the anticipated size-specific particulate (PM<sub>10</sub>) NAAQS within the highest probability nonattainment areas. Regions will continue

to place high priority on the implementation of various elements of the national air toxics strategy by promoting, assisting, and overseeing State and local agency plans and activities for the development and improvement of comprehensive air toxics programs. Regions will help States implement initiatives to gather data, evaluate exposures, and develop regulations where appropriate for mitigating exposure from high risk sources (including new sources to foster equity). Regions will help States initiate a multiple-year program to assess exposures and emissions in selected complex geographic areas having multiple source/pollutant interactions, including preparation of comprehensive inventories and analyses and the development of mechanisms for reducing exposures.

Resources will be provided for continuing at the 1986 level the National Air Audit System (NAAS) for review of State air quality planning, new source review, compliance assurance, air monitoring, and vehicle inspection/maintenance programs. Other Regional programs such as negotiating and overseeing grant agreements consistent with the Agency's performance-based grants policy, processing SIPs in an expeditious manner to minimize backlog, and responding to litigation on SIPs, will also continue.

#### 1986 Program

In 1986, the Agency is allocating a total of \$12,287,700 supported by 304.3 total workyears for this program, of which \$11,623,000 is from the Salaries and Expenses appropriation and \$664,700 is from the Abatement, Control and Compliance appropriation.

The principal focus of the Regional air management program is the implementation of the Agency's attainment policy for remedying deficient SIPs in areas violating the NAAQSs. Guidance is being provided to States developing corrective SIPs. Corrections are being reviewed for consistency and appropriate Federal Register rules are being completed.

Resources are also being provided to assist States to develop and implement the necessary regulations and programs for attainment of NAAQSs within areas having extensions of the attainment deadline for ozone and carbon monoxide. Also, resources are being provided to help States define requirements, assess possible problems, and prepare to respond to the anticipated NAAQS for PM<sub>10</sub>.

Other significant actions include review and rulemaking on SIPs implementing court-ordered regulatory changes on stack heights. The NAAS is continuing on a biennial basis to evaluate State regulatory programs by reviewing half of the States every year. State-submitted revisions to SIPs are being processed in an expeditious manner, minimizing backlog. During 1985, the Agency completed and announced the National Air Toxics Strategy. Consistent with the national toxics strategy, initiatives are being undertaken to help States prepare multiple-year plans to build and enhance air toxics programs and to gather data needed to assess specific high risk pollutant or source situations. Specific steps will be taken to negotiate effective grant agreements with State and local agencies implementing Agency policy on performance-based grants.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$11,152,600 supported by 284.9 total workyears, of which \$10,852,400 was from the Salaries and Expenses appropriation and \$300,200 was from the Abatement, Control and Compliance appropriation.

In 1985, Regional air management efforts focused on the development, review, and approval of State strategies, regulations, and actions in areas that missed the 1982 deadline or have extensions for attainment to 1987. Implementation of the Agency policy for remedying deficient SIPs in areas violating the NAAQSs continued.

The Regional program also worked with a number of States to develop lead SIPs consistent with provisions required by the settlement of litigation against the Agency. The Regions completed review and approval or disapproval actions where lead SIPs were submitted.



Rulemaking actions for State strategies and revisions continued to be processed in an efficient manner to prevent recurrence of any major SIP backlog. Also, the program continued to negotiate air grants and carry out the NAAS for review of State air quality planning, new source review, compliance assurance, air monitoring and inspection/maintenance programs.

# AIR

## Trends Monitoring & Progress Assessment

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
-----							
PROGRAM:							
-----							
Ambient Air Quality Monitoring							
Salaries & Expenses	\$3,534.9	\$3,781.0	\$3,732.9	-\$160.5	\$3,572.4	\$3,782.9	\$210.5
Abatement Control and Compliance	\$97.2	\$114.2	\$114.2	-\$4.9	\$109.3	\$114.2	\$4.9
TOTAL	\$3,632.1	\$3,895.2	\$3,847.1	-\$165.4	\$3,681.7	\$3,897.1	\$215.4
Air Quality & Emissions Data Management & Analysis							
Salaries & Expenses	\$3,306.0	\$3,151.8	\$4,637.2	-\$199.4	\$4,437.8	\$3,137.2	-\$1,300.6
Abatement Control and Compliance	\$1,841.9	\$1,274.3	\$1,274.3	-\$54.9	\$1,219.4	\$1,229.3	\$9.9
TOTAL	\$5,147.9	\$4,426.1	\$5,911.5	-\$254.3	\$5,657.2	\$4,366.5	-\$1,290.7
TOTAL:							
Salaries & Expenses	\$6,840.9	\$6,932.8	\$8,370.1	-\$359.9	\$8,010.2	\$6,920.1	-\$1,090.1
Abatement Control and Compliance	\$1,939.1	\$1,388.5	\$1,388.5	-\$59.8	\$1,328.7	\$1,343.5	\$14.8
Trends Monitoring & Progress Assessment							
TOTAL	\$8,780.0	\$8,321.3	\$9,758.6	-\$419.7	\$9,338.9	\$8,263.6	-\$1,075.3

# AIR

## Trends Monitoring & Progress Assessment

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
-----							
PERMANENT WORKYEARS							
-----							
Ambient Air Quality Monitoring	86.2	84.8	85.7		85.7	85.7	
Air Quality & Emissions Data Management & Analysis	63.2	65.1	65.1		65.1	65.1	
TOTAL PERMANENT WORKYEARS	149.4	149.9	150.8		150.8	150.8	
TOTAL WORKYEARS							
-----							
Ambient Air Quality Monitoring	91.6	92.5	92.5		92.5	92.5	
Air Quality & Emissions Data Management & Analysis	66.8	65.6	65.6		65.6	65.6	
TOTAL WORKYEARS	158.4	158.1	158.1		158.1	158.1	

## Trends Monitoring and Progress Assessment

Budget Request

The Agency requests a total of \$8,263,600 supported by 158.1 total workyears for 1987, a decrease of \$1,075,300 and no change in total workyears from 1986. Of the request \$6,920,100 will be for the Salaries and Expenses appropriation and \$1,343,500 will be for the Abatement, Control and Compliance appropriation, a decrease of \$1,090,100 and an increase of \$14,800, respectively.

Program Description

This subactivity includes the following programs:

Ambient Air Quality Monitoring -- Activity in this program includes: (1) EPA's management overview of State ambient air quality monitoring networks, associated laboratory and field quality assurance activities, and implementation of air monitoring strategies described in EPA air monitoring regulations; (2) the coordination of Regional and State field investigation activities for collecting ambient air quality samples for subsequent sample analysis and related quality control; (3) the review of source emissions data; and (4) the necessary management and coordination to ensure timely storage and validation of the data collected.

Air Quality and Emissions Data Management and Analysis -- Major activities include: (1) national coordination of Regional Office, State, and local ambient monitoring, air quality modeling, and emission inventory programs; (2) issuance of new and revised regulatory requirements and related technical guidance; (3) development and operation of information management systems for storing, retrieving, and analyzing ambient air quality and emission data at the State and national level; and (4) preparation of trends analyses and related air quality and emission progress assessments for program evaluation and development and for public information needs.

AMBIENT AIR QUALITY MONITORING1987 Program Request

The Agency requests a total of \$3,897,100 supported by 92.5 total workyears for this program, of which \$3,782,900 will be for the Salaries and Expenses appropriation and \$114,200 will be for the Abatement, Control and Compliance appropriation. This represents increases of \$210,500 and \$4,900, respectively and no change in total workyears. The increases reflect primarily increased operating costs for the program.

In 1987, the EPA Regional Offices will continue overview and management of State air monitoring programs, including review of grants made under section 105 of the Clean Air Act. They will also continue the coordination of data bases involving emissions data, criteria pollutant air quality data, and related precision and accuracy information necessary for quantifying data quality. Monitoring networks and data supporting highly controversial or technically difficult construction permits under the prevention of significant deterioration program will be reviewed.

The data bases from the National Air Monitoring System (NAMS) and State and Local Air Monitoring System (SLAMS) networks will be validated for completeness and accuracy. Approximately 100 new or revised NAMS sites will be visited, evaluated, and documented. Data analyses, including air quality and emission trends information, will be developed as input to various environmental management and indicator efforts, including the Regional Environmental Management Reports. In the area of quality assurance, significant resources will be used for on-site systems and performance audits of State networks and monitors. In addition, the

Regional labs will participate in the national air audit program. The start-up of State networks for measurement of size-specific particulates (PM<sub>10</sub>) will require review of the NAMS and SLAMS networks, including site visits to verify compliance with the new monitoring regulations.

Regional Offices will be involved in the implementation of the air toxics monitoring strategy. This involvement will include coordinating with State and local agencies and the EPA Office of Research and Development to set up additional air toxics monitoring trend stations, assisting in site selection for monitoring stations, and ensuring samples are collected and sent to a central laboratory for analysis.

Resources will also provide monitoring/quality assurance support and technical assistance to States in evaluating the impact of sources of specific toxic air pollutants. These sources would be ones considered for regulation under State control programs. Special ozone data analyses will be performed for selected cities where attainment is not expected in 1987. Resources will be used for management, coordination and technical assistance necessary to develop a toxic data base in specific geographic areas. The support will include emission and air quality data bases as well as ancillary information needed for modeling.

#### 1986 Program

In 1986, the Agency is allocating a total of \$3,681,700 supported by 92.5 total workyears for this program, of which \$3,572,400 is from the Salaries and Expenses appropriation and \$109,300 is from the Abatement, Control and Compliance appropriation.

In 1986, the Regions are continuing the baseline program of overview and management of State emissions and air quality monitoring programs, including section 105 grants review. The Regions are continuing their program of on-site visits to review and audit NAMS networks and a small percentage of SLAMS. The validation and coordination of State and local air quality and emission data, before the data are submitted to central EPA data banks, are also continuing. In 1986, special emphasis is being placed on reviewing the data bases upon which attainment status determinations will be made for the revised National Ambient Air Quality Standard (NAAQS) for PM<sub>10</sub>. The Regions and States are continuing their analysis of the total monitoring network needed to support development of State Implementation Plans (SIPs) for size-specific particulates and subsequent tracking of progress and trends in meeting the revised NAAQS. The data needed for various environmental management efforts are being compiled and displayed for use in determining existing conditions, trends, and progress toward environmental objectives. Quality assurance activities and auditing of State programs are continuing, with additional emphasis placed on the National Air Audit System. The toxic air monitoring station network is being operated in three cities.

#### 1985 Accomplishments

In 1985, the Agency obligated \$3,632,100 supported by 91.6 total workyears for this program, of which \$3,534,900 was from the Salaries and Expenses appropriation and \$97,200 was from the Abatement, Control and Compliance appropriation. Contract funds from the Abatement, Control, and Compliance appropriation were used for Regional data analyses and preparation of the Regional Environmental Management Reports.

The SLAMS networks were reviewed and an assessment of equipment needs made. The Regional Offices continued to work with States, through the annual review process, in identifying and eliminating air monitoring sites which have only marginal utility or are the least useful in supporting program decisions. The Regions continued their programs of site visits to evaluate and document NAMS

stations, as well as a small percentage of SLAMS stations. Laboratories were evaluated for proper operating and quality assurance procedures. The management, coordination, and validation of State and local air quality and emission data before submission to EPA's central data banks also continued.

## AIR QUALITY AND EMISSIONS DATA MANAGEMENT AND ANALYSIS

### 1987 Program Request

The Agency requests a total of \$4,366,500 supported by 65.6 total workyears for this program, of which \$3,137,200 will be for the Salaries and Expenses appropriation and \$1,229,300 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of \$1,300,600 and an increase of \$9,900, respectively, and no change in total workyears from 1986. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. The decrease reflects completion of the air quality subsystem and elements of the facility subsystem of the Aerometric Information Retrieval System (AIRS).

Existing air data systems will be maintained and guidance provided to users. Monitoring regulations, modeling guidance, emission factors, and computer software will be modified to accommodate changes to NAAQSs. The program also will produce ambient and emission trends analyses and progress assessments, provide national oversight of Regional Office and State and local air monitoring programs, and manage the NAMS network. A fine particulate monitoring strategy will be developed. The program will also continue development of the facility subsystem of the AIRS and bring the air quality subsystem into operation within EPA and selected control agencies in preparation for phasing out the obsolete Storage and Retrieval of Aerometric Data (SAROAD) system. Statistical analyses will be provided to support new or revised NAAQSs.

In the area of air toxics, the program will continue to implement the national toxics monitoring strategy. The Toxic Air Monitoring System (TAMS) network will be expanded. Implementation of the Agency National Air Toxics Strategy will continue with the development of guidelines on ambient monitoring and guidance for estimating emissions and developing emissions inventories for several toxic pollutants and/or source categories of concern to State or local agencies. In addition, the program will provide specialized scientific data and guidance to States developing SIPs for PM<sub>10</sub>. The program will also develop data and technical guidance to support new and revised NAAQSs, with emphasis on rural ozone and fine particulates. Specialized analyses will also be conducted to assist in resolving remaining post-1982 nonattainment problems.

In addition, emission factors for criteria pollutants will be updated for high priority source categories and work will be completed on developing an emissions data base for acid precipitation assessments. The modeling program will continue. This includes active implementation of the modeling guideline, guidance and oversight of modeling applications, impact analyses to support New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), and NAAQS development, and operation of the modeling clearinghouse for sulfur dioxide.

### 1986 Program

In 1986, the Agency is allocating a total of \$5,657,200 supported by 65.6 total workyears for this program, of which \$4,437,800 is from the Salaries and Expenses appropriation and \$1,219,400 is from the Abatement, Control and Compliance appropriation.

Improvements to the general monitoring regulations are being promulgated. Also, revised monitoring regulations to reflect revisions to the NAAQSs for particulate matter and sulfur dioxide are being proposed. Implementation of the toxic pollution monitoring strategy is continuing with the expansion of the TAMS network to two sites in each of the TAMS' three cities.

The emissions program is concentrating on completing PM<sub>10</sub> emission factors, managing Regional Office and State efforts to develop an emissions data base for acid precipitation assessments, completing reports on dioxin emission tests, and providing preliminary data for toxic pollutants. The modeling program is being maintained. An updated modeling guideline is being promulgated, operation of the sulfur dioxide Model Clearinghouse and other photochemical and dispersion modeling guidance activities are continuing, and the multi-year program to evaluate model

accuracy is proceeding on schedule. Diffusion modeling support is continuing for estimating the effect of toxic emissions on the environment as the Agency's air toxics strategy is implemented. Development of the facility subsystem for AIRS has been initiated. Development of the air quality subsystem will continue with testing of software and preparation of data bases for conversion. Scientific analyses in support of new and revised ambient and emission standards are continuing. Efforts to develop the scientific data, monitoring regulations, emission factors, and other technical guidance necessary for successful implementation of the proposed PM<sub>10</sub> NAAQS will be continued.

#### 1985 Accomplishments

In 1985, the Agency obligated \$5,147,900 supported by 66.8 total workyears for this program, of which \$3,306,000 was from the Salaries and Expenses appropriation and \$1,841,900 was from the Abatement, Control and Compliance appropriation. Contract funds supported the ambient monitoring program, the emission factor program, air quality modeling, guidance for revised NAAQS implementation and trends reports and analyses.

In 1985, emphasis continued on operating the existing air data systems, and on providing support to 35 State and local agencies using EPA developed data systems. Other major activities included preparation of special air quality and emission analyses, statistics, and reports; national oversight of State and local monitoring programs including on-site audits of 70 NAMS; and modeling guidance and support including operation of the control strategies clearinghouse. Implementation of the national strategy for air toxics monitoring continued, including preparation of guidance on network design and operation; assessing progress in toxics monitoring by Federal, State, and local agencies; and developing a long-term plan for the implementation of the toxics monitoring strategy. Emission tests were conducted to support the National Dioxin Study. Also, in 1985, the program published one criteria pollutant emission factor supplement and emission factors for five toxic substances. PM<sub>10</sub> emission inventory guidance was also prepared. Development of the air quality segment of AIRS continued with completion of software for maintaining the geographical files, converting data, and retrieving data.









# **Enforcement**



ENVIRONMENTAL PROTECTION AGENCY

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AIR

Stationary Source Enforcement

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
-----								
(DOLLARS IN THOUSANDS)								
-----								
PROGRAM								
-----								
Stationary Source Enforcement								
Salaries & Expenses	\$10,790.7	\$12,008.5	\$11,883.0	-\$511.1	\$11,371.9	\$12,155.8	\$783.9	
Abatement Control and Compliance	\$2,981.0	\$3,038.0	\$3,038.0	-\$130.6	\$2,907.4	\$2,941.0	\$33.6	
TOTAL	\$13,771.7	\$15,046.5	\$14,921.0	-\$641.7	\$14,279.3	\$15,096.8	\$817.5	
TOTAL:								
Salaries & Expenses	\$10,790.7	\$12,008.5	\$11,883.0	-\$511.1	\$11,371.9	\$12,155.8	\$783.9	
Abatement Control and Compliance	\$2,981.0	\$3,038.0	\$3,038.0	-\$130.6	\$2,907.4	\$2,941.0	\$33.6	
Stationary Source Enforcement	TOTAL	\$13,771.7	\$15,046.5	\$14,921.0	-\$641.7	\$14,279.3	\$15,096.8	\$817.5
PERMANENT WORKYEARS								
-----								
Stationary Source Enforcement	282.0	291.0	291.4		291.4	297.4	6.0	
TOTAL PERMANENT WORKYEARS	282.0	291.0	291.4		291.4	297.4	6.0	
TOTAL WORKYEARS								
-----								
Stationary Source Enforcement	297.3	312.5	312.4		312.4	318.4	6.0	
TOTAL WORKYEARS	297.3	312.5	312.4		312.4	318.4	6.0	

## Stationary Source Enforcement

Budget Request

The Agency requests a total of \$15,096,800 supported by 318.4 total workyears for 1987, an increase of \$817,500 and 6.0 total workyears from 1986. Of the request \$12,155,800 will be for the Salaries and Expenses appropriation and \$2,941,000 will be for the Abatement, Control and Compliance appropriation, increases of \$783,900 and \$33,600, respectively.

Program Description

The stationary source enforcement program provides direct Federal enforcement and support to, and coordination with, State and local air pollution control agencies as required to ensure that stationary sources achieve and maintain compliance with the requirements of the Clean Air Act, as amended in 1977. The EPA headquarters component provides national policy and guidance, while the Regional Office program implements the enforcement effort and assists the States.

Stationary Source Enforcement -- This program focuses primarily on enforcement of the requirements established in State Implementation Plans (SIPs) for meeting National Ambient Air Quality Standards (NAAQSs). The enforcement program also focuses on new source programs such as New Source Performance Standards (NSPSs) and National Emission Standards for Hazardous Air Pollutants (NESHAPs).

As a result of industry efforts in controlling emissions and the effectiveness of State, local, and Federal control programs, approximately 90 percent of the more than 18,000 major stationary sources have achieved compliance with all applicable emission limitations. Although the current rate of compliance represents a significant achievement, efforts must continue to ensure that remaining sources come into compliance with present standards, that compliance is obtained with any new or revised standards, and that compliance, once achieved, is maintained. EPA will continue to provide State and local agencies with technical support in their efforts to realize these goals and, where appropriate, initiate its own enforcement actions.

STATIONARY SOURCE ENFORCEMENT1987 Program Request

The Agency requests a total of \$15,096,800 supported by 318.4 total workyears for this program, of which \$12,155,800 will be for the Salaries and Expenses appropriation and \$2,941,000 will be for the Abatement, Control and Compliance appropriation. This represents increases of \$783,900 and \$33,600, respectively, and an increase of 6.0 total workyears. Increased resources will support a pilot inspection project to determine whether intensive inspections of particulate and volatile organic compound (VOC) sources can result in a major reduction in air toxics.

In 1987, the stationary source compliance program will carry forward the basic thrust of the program now being implemented in 1986. The program, working in close cooperation with State and local agencies, will continue to ensure that noncomplying significant sources in areas not meeting NAAQSs are brought into compliance, consistent with the Clean Air Act. Enforcement actions will be brought against NSPSs, NESHAPs, and prevention of significant deterioration (PSD) violators and against Class A sources in nonattainment areas (i.e., sources with actual or potential uncontrolled emissions of at least 100 tons per year).

Implementation of the asbestos demolition and renovation strategy will continue, as will initiatives to enforce other NESHAPs. Use of Continuous Emissions Monitoring (CEM) data will be expanded in inspection targeting and enforcement. The fundamental activities such as permitting and compliance functions for non-

delegated programs, maintenance of data systems, participation in section 105 grant management and negotiation of State/EPA Agreements, review of State programs, and response to formal inquiries will be maintained.

In 1987, the stationary source compliance program will be increasing its efforts to enhance the compliance of VOC sources in ozone nonattainment areas. This will include an intensified overview program with additional and more comprehensive inspections of VOC sources in selected ozone nonattainment areas.

A pilot project will also be initiated to determine whether intensive inspections of sources subject to current air pollution emission standards for particulates and VOCs can result in a significant reduction in air toxics. Such intensive inspections should result in greater attention to source operation and maintenance, minimizing constant or cyclic emissions which in the aggregate present a significant health risk, especially in "hot spot" areas comprising a multiplicity of sources with such emissions.

During 1987, the Regional compliance program will continue to provide assistance in selected Federal judicial referrals, consent decrees, and section 120 actions. There are plans to conduct an estimated 1,694 inspections, and issue approximately 131 administrative orders during 1987. The Regional Offices will also provide training and workshops for State inspectors and support the development of local compliance strategies.

In 1987, EPA Headquarters will develop policy guidance and planning and budgeting materials; review selected Regional activities and Regional program performance; assure the enforceability of proposed Agency regulations under NSPSs, NESHAPs, and new source/PSD programs; respond to formal inquiries; manage the Compliance Data System; develop workshops, manuals, and pilot studies; and manage a program to provide technical analysis and case support for Regional compliance activities.

#### 1986 Program

In 1986, the Agency is allocating a total of \$14,279,300 supported by 312.4 total workyears to this program, of which \$11,371,900 is from the Salaries and Expenses appropriation and \$2,907,400 is from the Abatement, Control and Compliance appropriation.

The major focus of the stationary source compliance program in 1986 is to ensure that noncomplying significant sources are brought into compliance. Efforts to improve working relationships with State and local air pollution agencies and to improve their technical capabilities are continuing through such program-building activities as technical workshops and manuals, as well as direct case assistance where requested. Federal enforcement action is focusing heavily on violating sources in nonattainment areas, with particular emphasis on VOC sources. EPA is working closely with States in this effort through implementation of Agency guidance on timely and appropriate enforcement actions. Efforts are continuing to improve the inventory of regulated VOC sources and information on source compliance status. Efforts are also being directed at resolution of NSPS and NESHAP violators, where the standards have not been delegated or where State action is inadequate. Major initiatives in 1986 include implementation of the Agency's NESHAPs enforcement strategy for asbestos demolition and renovation sources and enforcement of CEM requirements for NSPS sources.

During 1986, the Regional compliance program is also continuing to provide assistance in selected Federal judicial referrals, consent decrees, and section 120 actions. Also, EPA is to issue administrative orders, as necessary, in environmentally significant cases where States cannot or will not take appropriate enforcement action. There are plans to conduct an estimated 1,725 inspections and issue approximately 105 administrative orders during 1986.



Headquarters efforts in 1986 include continuation of continuous compliance pilot projects. As part of the initiative to explore various techniques to address problems of ensuring continuous compliance, the surveillance targeting pilot initiated in 1985 is being completed and new pilot projects, relating to recordkeeping requirements and analysis of alleged malfunction data, are being initiated. Work to promote use of CEM equipment, including support for Regional and State efforts directed at enforcing CEM requirements for NSPS sources, is a major activity in 1986. Considerable emphasis is being placed on addressing issues relating to VOC sources, including development of strategies to address Class B violators. Oversight of Regional programs to ensure national consistency and effectiveness, through a combination of review of certain classes of enforcement actions and a more comprehensive programmatic review, remains a significant function of this program.

Major Headquarters program accomplishments in 1986 include: the development of a Class B VOC source compliance strategy; review of proposed Agency regulations under NSPSs, NESHAPs, and new source/PSD programs; management of the Compliance Data System; support of State compliance data programs development; provision of technical analysis and case support for Regional Office compliance activities, development of three new technical workshops to enhance the capabilities of State and local programs; and development of two new compliance manuals for State and local programs.

#### 1985 Accomplishments

In 1985, the Agency obligated \$13,771,700 supported by 297.3 total work-years for this program, of which \$10,790,700 was from the Salaries and Expenses appropriation and \$2,981,000 was from the Abatement, Control and Compliance appropriation. Extramural resources were used for enforcement case development activities, compliance monitoring, Regional data management, development of technical workshops and manuals to enhance State and local programs capabilities, and limited direct case assistance to States.

A major Headquarters accomplishment in 1985 was the implementation of the asbestos demolition and renovation and vinyl chloride NESHAPs compliance monitoring and enforcement strategies which address the most significant incidences of NESHAPs noncompliance. The inspection frequency guidance to State and local air pollution control agencies was revised to improve the definition of an acceptable inspection. As part of an effort to find ways to upgrade inspection programs, EPA completed three continuous compliance pilots.

Also during 1985, the program promulgated second-period nonferrous smelter order regulations, establishing a regulatory framework for compliance extensions through January 1, 1988. Program accomplishments during 1985 also included work toward the development of four technical workshops to enhance the capabilities of State and local programs, and completion of one new compliance manual. During 1985, EPA issued 101 administrative orders, and conducted 1726 inspections.

## AIR

## Mobile Source Enforcement

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
Mobile Source Enforcement							
Salaries & Expenses	\$4,653.6	\$4,759.4	\$4,950.2	-\$212.8	\$4,737.4	\$4,897.7	\$160.3
Abatement Control and Compliance	\$1,962.1	\$1,821.5	\$1,821.5	-\$78.3	\$1,743.2	\$2,021.5	\$278.3
TOTAL	\$6,615.7	\$6,580.9	\$6,771.7	-\$291.1	\$6,480.6	\$6,919.2	\$438.6
TOTAL:							
Salaries & Expenses	\$4,653.6	\$4,759.4	\$4,950.2	-\$212.8	\$4,737.4	\$4,897.7	\$160.3
Abatement Control and Compliance	\$1,962.1	\$1,821.5	\$1,821.5	-\$78.3	\$1,743.2	\$2,021.5	\$278.3
Mobile Source Enforcement TOTAL	\$6,615.7	\$6,580.9	\$6,771.7	-\$291.1	\$6,480.6	\$6,919.2	\$438.6
PERMANENT WORKYEARS							
-----							
Mobile Source Enforcement	96.8	99.3	106.8		106.8	102.8	-4.0
TOTAL PERMANENT WORKYEARS	96.8	99.3	106.8		106.8	102.8	-4.0
TOTAL WORKYEARS							
-----							
Mobile Source Enforcement	103.9	101.1	108.6		108.6	104.6	-4.0
TOTAL WORKYEARS	103.9	101.1	108.6		108.6	104.6	-4.0

## AIR

### Mobile Source Enforcement

#### Budget Request

The Agency requests a total of \$6,919,200 supported by 104.6 total workyears for 1987 an increase of \$438,600 and a decrease of 4.0 total workyears from 1986. Of the request, \$4,897,700 will be for the Salaries and Expenses appropriation and \$2,021,500 will be for the Abatement, Control and Compliance appropriation, an increase of \$160,300 and \$278,300 respectively.

#### Program Description

The mobile source enforcement program is directed primarily at ensuring compliance with the motor vehicle emission standards and fuel regulations required by the Clean Air Act. The activities carried out as part of this program are designed to ensure that new and in-use vehicles are capable of meeting emission standards throughout their useful lives, that vehicle emission control systems are not removed or rendered inoperative, and that harmful additives are not present in gasoline. The program also includes the issuance of California and statutory emissions waivers.

#### MOBILE SOURCE ENFORCEMENT

##### 1987 Program Request

The Agency requests a total of \$6,919,200 supported by 104.6 total workyears for this program, of which \$4,897,700 will be for the Salaries and Expenses appropriation and \$2,021,500 will be for the Abatement, Control and Compliance appropriation. This represents increases of \$160,300 and \$278,300, respectively, and a decrease of 4.0 total workyears. The decreases are related to the fuels enforcement program. The increase will support additional recall and fuels investigation.

In support of the ozone control strategy, the recall program will involve investigation of 20 suspect light-duty vehicle exhaust emission classes, together with related diagnostic evaluation and remedy development work. Noncompliance penalties for heavy-duty engines will be implemented. An estimated five emissions waiver requests from the State of California will be processed. The regulatory revision of the imports requirements (scheduled for promulgation in late 1986) will be implemented, while at the same time the program will process an estimated 128,000 applications for importation of nonconforming vehicles. The Selective Enforcement Audit (SEA) program will conduct 17 audits of light-duty manufacturer facilities and four audits of heavy-duty manufacturer facilities to ensure that new production vehicles and engines meet emissions requirements. Approximately 1,200 consumer inquiries on emissions warranty issues will be answered. The anti-tampering and anti-fuel switching enforcement program will include 450 investigations, which will result in an estimated 50 notices of violation. Surveys of the incidence of tampering and fuel switching will be carried out at 15 sites. EPA will continue to assist with the development of State and local initiatives aimed at preventing tampering and fuel switching. Implementation of nine new State programs, for a cumulative total of 37, is anticipated. A new anti-tampering preventive action initiative will commence with the establishment of programs in ten locations. An expanded fuels enforcement program will focus on assuring that effective enforcement of the lead phasedown regulations is not limited to paper reviews of refineries and that it applies to all elements of the fuels market, including the growing numbers of importers and blenders; assuring that new fuel additives introduced into the market in response to the curtailment of lead do not pose new environmental hazards; conducting 12,000 inspections of vehicle fueling facilities and making determinations on an estimated three fuels waiver applications. A study of the effects of using unleaded and low lead gasoline on farm equipment will be completed.

## 1986 Program

In 1986, the Agency is allocating a total of \$6,480,600 supported by 108.6 total workyears for this program, of which \$4,737,400 is from the Salaries and Expenses appropriation and \$1,743,200 is from the Abatement, Control and Compliance appropriation.

The recall program continues surveillance and confirmatory testing, follow-up and investigation of suspect engine classes, and, if warranted, issuance of recall orders. New activities underway in the recall program include a pilot evaporative emissions recall investigation program. Statutory and California waivers will be issued as required. The SEA program continues to ensure that new production vehicles comply with emission requirements. Inquiries and applications for the importation of noncertified vehicles will continue, and regulations revising the imports program will be promulgated.

Also underway is the development and implementation of a strategy aimed at attaining increased State participation to reduce automobile emissions that result from tampering and fuel switching. This will result in the establishment of nine new anti-tampering and fuel switching programs by States and localities. Other activities include: conducting fuels inspections for compliance with lead, nozzle, and label regulations; administering tampering and fuel switching cases; evaluating fuel and fuel additive waiver requests; and collecting data on fuel switching to assess misfueling rates. A study of the effects on farm equipment of the lead phasedown regulations will be started.

## 1985 Accomplishments

In 1985, the Agency obligated \$6,615,700 supported by 103.9 total workyears for this program, of which \$4,653,600 was from the Salaries and Expenses appropriation and \$1,962,100 was from the Abatement, Control and Compliance appropriation.

Recall investigations were conducted for 35 mid-mileage vehicle classes, and 17 SEAs were performed. Two emissions waivers were issued and nine were reviewed. Over 16,000 letters and 44,000 telephone inquiries regarding importation of vehicles were answered and 69,383 applications were received. Revised import regulations were prepared. Six notices of violation were issued under the lead phasedown program, and 645 notices of violation under the anti-tampering and fuel switching program. Five States and localities implemented anti-tampering and fuel switching programs. A revised rule for phasing down the use of lead in gasoline was promulgated.

# **Water Quality**



# ENVIRONMENTAL PROTECTION AGENCY

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# WATER QUALITY

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
APPROPRIATION							
Salaries & Expenses	\$95,148.0	\$98,791.6	\$99,808.8	-\$4,291.8	\$95,517.0	\$95,712.1	\$195.1
Abatement Control and Compliance	\$127,048.3	\$131,306.9	\$144,646.9	-\$6,219.8	\$138,427.1	\$114,628.9	-\$23,798.2
Research & Development	\$14,713.6	\$11,587.7	\$12,124.7	-\$521.7	\$11,603.0	\$7,500.0	-\$4,103.0
Abatement Control and Compliance	\$13,000.0						
TOTAL, Water Quality	\$249,909.9	\$241,686.2	\$256,580.4	-\$11,033.3	\$245,547.1	\$217,841.0	-\$27,706.1
PERMANENT WORKYEARS	1,957.0	2,003.3	2,056.5		2,056.5	2,021.1	-35.4
TOTAL WORKYEARS	2,191.5	2,248.6	2,283.0		2,283.0	2,181.8	-101.2
OUTLAYS	\$240,952.3	\$241,236.4	\$246,907.3	-\$6,595.9	\$240,311.4	\$235,732.7	-\$4,578.7
AUTHORIZATION LEVELS	Authorization for the Clean Water Act, except for Construction Grants, expired September 30, 1982. The authorization for Construction Grants expired September 30, 1985. Reauthorization for both is pending.						



## WATER QUALITY

### OVERVIEW AND STRATEGY

The Agency derives its water quality objectives from two statutes: the Clean Water Act and the Marine Protection, Research and Sanctuaries Act. Both laws direct the Agency to take measures to protect the Nation's waters to safeguard public health, recreational use, and aquatic life.

The Clean Water Act provides a comprehensive structure for water pollution control. The Act relies on a well-defined partnership between EPA and the States. EPA continues to encourage the States to take primary responsibility for implementing the Act. The Act provides for monitoring of water quality, water quality management planning to design needed control measures, development of water quality standards, and establishment of technology-based and water quality-based effluent limits for point source dischargers. EPA and the States implement a permit and enforcement program for municipal and industrial point source dischargers. EPA and the Corps of Engineers regulate discharges of dredged and fill materials into U.S. waters. In addition, the Act provides for grants to communities for construction of wastewater treatment facilities.

The Marine Protection, Research and Sanctuaries Act is designed to protect the ocean from unregulated dumping of material that would endanger human health, public welfare, the marine environment, or economic potential. The Act authorizes the Agency to develop criteria for ocean disposal of industrial waste, municipal sludges and other materials, and dredged materials and incineration-at-sea. For both ocean dumping and incineration-at-sea, EPA is authorized to designate disposal sites and issue permits for all non-dredged materials. Although the Corps of Engineers is responsible for issuing permits for dredged materials, EPA must review those applications for consistency with Agency criteria.

In 1987 and beyond, water quality programs will follow several major directions to include moving base programs from standards and guidance development to implementation and compliance; emphasizing toxic controls across all programs; strengthening protection of all waters from difficult or uncontrolled sources of pollution; focusing on integrated intermedia impacts; and managing for targeted environmental results.

The 1987 Water Quality request focuses on several major objectives to meet the requirements of the Acts in the 1980s:

#### National Municipal Policy Enforcement Follow-Up

The National Municipal Policy was adopted by the Agency as a means of assuring that all municipalities meet the statutory requirements for wastewater discharge limitations by no later than July 1, 1988, except in cases of physical or financial impossibility. The policy has substantial environmental significance as it seeks to accelerate the installation of necessary treatment technology, thus reducing the loading of pollutants, including toxic pollutants, introduced into the Nation's waters. With the rapidly approaching deadline, and with the potential contribution by municipalities to water quality standards violations, including toxics, this activity will continue to be a high priority in 1987. By the end of 1986, all major municipalities in nondelegated States needing construction to meet permit limits will have been placed on enforceable schedules. In 1987, EPA will focus on assuring that permittees placed on enforceable schedules comply with those schedules and will substantially increase efforts to place minor permittees on enforceable compliance schedules.

## Pretreatment Compliance and Enforcement

The pretreatment program provides a mechanism for the control of toxic discharges to sewage treatment plants, thus protecting treatment plant operation and reducing the pass-through of toxic pollutants to the environment. By the end of 1986, all Publicly Owned Treatment Works (POTWs) needing pretreatment programs should have approved programs in place.

In 1987, EPA efforts will shift from program approval to oversight of delegated State programs, oversight of approved POTW programs where there is no State delegation, and direct implementation where there is no local control authority or approved State. Direct implementation by EPA will include compliance assessment and enforcement against industrial users, including detailed sampling inspections where necessary, to determine compliance with categorical standards.

EPA will initiate enforcement actions against noncomplying POTWs in nondelegated States which fail to implement the approved program. Parallel enforcement actions will be taken against industries which discharge into these POTWs.

## Permit Issuance

Permit issuance will continue to focus on control of toxic pollutants discharged to surface waters. The EPA major permit backlog should be eliminated by the end of 1985 and the backlog will stay below 10% at least through 1987. The general focus during 1987 will be on issuing permits that expired or will expire during the year and on modifying permits, with priority being given to toxic pollutant controls and water quality considerations. EPA will continue to work with delegated States and assist them in reducing their major permit backlog, which should be eliminated by the end of 1986. Additionally, major municipal permits will be modified to incorporate final 301(h) waiver decisions, pretreatment program approvals and related implementation requirements. Increased emphasis will be placed on issuing permits to environmentally significant minor and unpermitted dischargers, especially those that adversely affect water quality and those with toxic discharges.

In waters where Best Available Technology (BAT) is not sufficient to achieve State water quality standards, EPA will continue to support States in adopting toxic criteria in water quality standards; to strengthen State capability to develop and issue water quality-based limitations for the control of toxic discharges; and to provide technical assistance in conducting waste load allocations which form the basis for permit limits based on water quality.

## Analysis of Toxic Pollutants

To support State water quality programs, EPA's criteria program will continue its work to identify and evaluate toxic pollutants through development of water quality criteria and advisories. Emphasis will shift from conventional pollutants and heavy metals to toxic pollutants which may be ubiquitous in the environment or whose potentially toxic effects at low levels are not known.

The program will also continue data collection and analyses of eight unregulated industrial categories known to discharge toxic pollutants, such as organic chemicals and metals, in significant amounts. The Agency will use these analyses to decide whether technology-based controls are needed for these industries.

In the area of intermedia impacts, the program will promulgate regulations for the use or disposal (land applications, distribution and marketing, landfilling, incineration and ocean disposal) of sewage sludge that protect human health and the environment from toxic pollutants in sludge. The program will examine other unregulated contaminants in fish tissue with potential to bio-accumulate in the food chain and consequently harm human health. This analysis of bioaccumulative pollutants may identify pollutants for which EPA needs to develop criteria in future years.

### Implementing a Marine Protection Program

The incineration-at-sea program should become operational with corresponding demands for permit writing and compliance activities for both burn sites and burn operations. These activities will also generate an increased need for monitoring at designated sites to assure minimal risk to the environment. There will be an increased emphasis on public outreach to increase the understanding of the general public to the environmental safety of the process. A national data system will be used to develop a systematic in-depth profile of the incineration process as a basis for future forecasting of environmental impacts and to develop recommendations for improved operations.

Comprehensive revisions to the ocean dumping regulations will be proposed. Ongoing site management responsibilities for ocean dumping sites will increase as more sites are designated final and the usage of deep water disposal sites increases.

### Focusing on Basins of Major Importance

The Agency will continue to focus on basins of major importance to the public and the Congress, by continuing the Federal commitment to the Chesapeake Bay and Great Lakes program, as well as to the estuarine management program begun in 1985. The Agency will support actions to implement the Chesapeake Bay Restoration and Protection Plan, through cost-sharing grants to the States, primarily for implementation of nonpoint source control practices in critical areas.

EPA's Great Lakes National Program Office will continue to meet the U.S. obligations under our International Agreement with Canada to support water pollution control in the Great Lakes. The focus will be on remedial action plans for the abatement of in-place toxics problems and the use of fish, water, and air sampling to determine water quality improvement and to identify emerging problems.

In 1987, the Agency will continue work begun in 1985 to quantify and control pollutant loads, assess basin-wide trends and recommend needed actions to restore or enhance environmental quality of Long Island Sound, Narragansett Bay, Buzzards Bay, and Puget Sound. The Agency will manage a technology transfer system to ensure that the technologies and methodologies developed in these basins are shared with other Federal, State and local programs.

In order to address nonpoint sources of pollution, EPA will work with other Federal agencies to identify and encourage the use of appropriate best management practices on Federal lands, with special emphasis on priority areas such as the Chesapeake Bay. EPA will continue to encourage those agencies to support development of cost-effective State and local programs to control nonpoint sources in priority waters.

### Continuing Protection of Wetlands

The major effort in 1987 in the dredge and fill program will be to move toward a more focused, anticipatory program through the use of advanced identification; development and application of technical guidance and regulations to ensure effective protection of the waters of the United States; and encourage States to assume Section 404 permitting authority from the Federal government.

Headquarters will develop guidance and implement revised procedures to identify and address the most significant national environmental problems in wetlands and other aquatic systems. The Regions will review and comment on public notices of permit applications and will establish jurisdictional boundaries. Headquarters and Regions will develop innovative techniques to encourage State assumption of the program and increase cooperative efforts with other Federal agencies.

### Managing Construction Grants

The Agency will work with States in order to ensure an effective transition of management and financial responsibility to State and local governments. EPA will issue needed policies and guidance and provide technical assistance and training. EPA will continue essential oversight of delegated State programs and wastewater treatment facilities construction, operations, and maintenance to ensure continuing compliance with program requirements.

Although the Agency's request for budget authority is reduced from 1986, staffing remains relatively constant due to continuing workload associated with managing and completing projects funded from previous appropriations.

### Environmental Emergency Response

The Environmental Emergency Response program will continue to maintain an around-the-clock capability to receive notice of and respond to major incidents of accidental releases of oil or other petroleum products. (Spills of hazardous substances are covered under Superfund.) Removal actions will be directed by Regional personnel at serious incidents where the responsible party is unidentifiable, refuses to clean up, or is incapable of providing adequate response, and where State or local authorities lack appropriate expertise or resources.

The cleanup monitoring program will continue to provide incentives for adequate removal by responsible parties, as well as serve as a mechanism for drawing State and local agencies into directing removals themselves. The Agency's focus in 1987 will be on encouraging State and local governments to assume a greater share of the responsibility for responding to oil spills. Federal resources, therefore, will be concentrated on major actions where State, local, or private response is not feasible.

### Research and Development

In 1987 the program will emphasize research to support the development and implementation of regulations for sludge management and the impact of ocean dumping and incineration-at-sea on the marine ecosystem. The program will also initiate work for categorizing wetlands. Ongoing support for the permits and enforcement programs through validation of toxicity reduction evaluations and operation of the Discharge Monitoring Report Quality Assurance Program will be maintained. Evaluations of innovative and alternative waste treatment control technologies will continue. A pilot program will be initiated to charge to public and private users for certain quality assurance services provided by EPA.

# WATER QUALITY

	Actual 1985	Budget Estimate 1986	Current Estimate 1986	Estimate 1987	Increase (+) Decrease (-) 1987 vs. 1986
<u>PROGRAM ACTIVITIES</u>					
<u>Incremental Outputs</u>					
Ocean Dumping Permits.....	25	25	25	25	--
Construction Grants Awards.....	476	683	148	306	-148
Active Construction Grants Projects.....	4,319	3,972	2,849	2,352	-803
Step 3 and Step 2+3 Project Completions.....	833	942	773	821	+48
Permits Issued by EPA:					
Municipal					
Major.....	278	216	204	172	-32
Minor.....	411	250	320	500	+180
Non-Municipal					
Major.....	210	187	193	244	+51
Minor.....	650	500	306	1000	+694
General.....	2	15	8	15	+7
Adjudicatory Hearings Settled.....	67	104	80	104	+24
Enforcement Actions:					
Inspections.....	2,080	2,100	2,100	2,243	+143
Notices of Violation.....	24	110	50	50	--
Administrative Orders.....	1,028	491	642	877	+235
Civil Litigation.....	118	159	180	153	-27
Criminal Litigation.....	7	7	5	5	--
Clean Lakes Projects					
Awarded.....	30	0	25	0	-25
Water Quality Criteria.....	19	17	10	9	-1
<u>Cumulative Outputs</u>					
Signed 205(g) agreements.....	50	51	50	50	--
Final Effluent Guidelines.....	28	29	37	41	+4
Propose Regulations for Sludge Reuse/Disposal Options.....	--	5	5	5	--
NPDES State Program Approvals..	37	41	39	39	--
Local Pretreatment Program Approvals (EPA).....	581	730	670	670	--



# **Research and Development**





ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# WATER QUALITY

## Water Quality Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
Scientific Assessment - Water Quality							
Salaries & Expenses	\$285.9	\$302.5	\$302.8	-\$13.1	\$289.7	\$302.8	\$13.1
Research & Development	\$75.1	\$90.0	\$89.4	-\$3.9	\$85.5	\$383.0	\$297.5
TOTAL	\$361.0	\$392.5	\$392.2	-\$17.0	\$375.2	\$685.8	\$310.6
Monitoring Systems And Quality Assurance - Water Quality							
Salaries & Expenses	\$2,748.3	\$2,840.5	\$2,741.8	-\$117.8	\$2,624.0	\$2,719.6	\$95.6
Research & Development	\$694.0	\$861.9	\$857.3	-\$36.9	\$820.4	\$25.0	-\$795.4
TOTAL	\$3,442.3	\$3,702.4	\$3,599.1	-\$154.7	\$3,444.4	\$2,744.6	-\$699.8
Health Effects - Water Quality							
Salaries & Expenses	\$1,313.5	\$1,529.9	\$1,458.9	-\$62.7	\$1,396.2	\$1,515.4	\$119.2
Research & Development	\$1,386.2	\$1,460.6	\$1,334.3	-\$57.3	\$1,277.0	\$1,000.0	-\$277.0
TOTAL	\$2,699.7	\$2,990.5	\$2,793.2	-\$120.0	\$2,673.2	\$2,515.4	-\$157.8
Environmental Engineering And Technology - Water Quality							
Salaries & Expenses	\$2,794.3	\$2,384.6	\$2,441.6	-\$105.1	\$2,336.5	\$2,351.0	\$14.5
Research & Development	\$5,464.8	\$5,731.2	\$5,170.9	-\$222.5	\$4,948.4	\$3,892.0	-\$1,056.4
TOTAL	\$8,259.1	\$8,115.8	\$7,612.5	-\$327.6	\$7,284.9	\$6,243.0	-\$1,041.9
Environmental Processes And Effects - Water Quality							
Salaries & Expenses	\$8,486.3	\$9,357.2	\$9,214.9	-\$396.3	\$8,818.6	\$9,561.0	\$742.4
Research & Development	\$1,789.6	\$2,944.0	\$2,775.4	-\$119.4	\$2,656.0	\$1,700.0	-\$956.0
TOTAL	\$10,275.9	\$12,301.2	\$11,990.3	-\$515.7	\$11,474.6	\$11,261.0	-\$213.6

# WATER QUALITY

## Water Quality Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
Great Lakes Research -							
Water Quality							
Salaries & Expenses	\$970.4	\$683.3	\$683.1	-\$29.4	\$653.7	\$434.8	-\$218.9
Research & Development	\$1,341.4	\$500.0	\$1,897.4	-\$81.7	\$1,815.7	\$500.0	-\$1,315.7
TOTAL	\$2,311.8	\$1,183.3	\$2,580.5	-111.1	\$2,469.4	\$934.8	-\$1,534.6
TOTAL:							
Salaries & Expenses	\$16,598.7	\$17,098.0	\$16,843.1	-\$724.4	\$16,118.7	\$16,884.6	\$765.9
Research & Development	\$10,751.1	\$11,587.7	\$12,124.7	-\$521.7	\$11,603.0	\$7,500.0	-\$4,103.0
Water Quality Research TOTAL	\$27,349.8	\$28,685.7	\$28,967.8	-\$1,246.1	\$27,721.7	\$24,384.6	-\$3,337.1

## PERMANENT WORKYEARS

-----							
Scientific Assessment- Water Quality	3.0	2.5	4.5		4.5	4.5	
Monitoring Systems And Quality Assurance - Water Quality	46.4	42.5	42.7		42.7	42.7	
Health Effects - Water Quality	17.0	17.0	27.8		27.8	20.8	-7.0
Environmental Engineering And Technology - Water Quality	43.3	38.6	38.7		38.7	37.5	-1.2
Environmental Processes And Effects - Water Quality	127.2	148.9	148.1		148.1	150.5	2.4

# WATER QUALITY

## Water Quality Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
Great Lakes Research - Water Quality	6.8	6.4	6.4		6.4	6.4	
TOTAL PERMANENT WORKYEARS	243.7	255.9	268.2		268.2	262.4	-5.8
TOTAL WORKYEARS							
Scientific Assessment - Water Quality	6.0	6.0	6.0		6.0	6.0	
Monitoring Systems And Quality Assurance - Water Quality	55.7	54.0	53.4		53.4	53.4	
Health Effects - Water Quality	24.4	27.8	27.8		27.8	27.8	
Environmental Engineering And Technology - Water Quality	46.3	42.7	42.5		42.5	40.5	-2.0
Environmental Processes And Effects - Water Quality	157.7	187.0	184.6		184.6	176.0	-8.6
Great Lakes Research - Water Quality	10.0	8.0	8.0		8.0	8.0	
TOTAL WORKYEARS	300.1	325.5	322.3		322.3	311.7	-10.6

## WATER QUALITY

### Water Quality Research

#### Principal Outputs by Objective

##### 1987 PLANNED OUTPUTS

=====

##### Objective 1: Develop the Scientific Data to Support a Water Quality Based Approach to Pollution Control

- o Evaluation of the feasibility of applying the ecoregion approach to water quality standards (Env. Processes)
- o Determination of the relationship between lipid content, body burden and the thermodynamic calculation of bioaccumulation (Env. Processes)
- o Development of Water Quality Health Advisories (Sci. Assessment)
- o Provision of site specific Water Quality Health Hazard Evaluations/Documentation, and Water Quality Criteria Modification Support (Sci. Assessment)
- o Provision of Health Effects Bioassay Methods Manual for determining whether receiving streams meet Water Quality Standards (Health)
- o Evaluation of a generic approach for chemical measurement of toxic organics and inorganics in ambient and non-point sources (Monitoring)

##### Objective 2: Develop Scientific Data Needed to Support Environmentally Sound Ocean Disposal, Estuarine and Great Lakes Programs

- o Hazard assessment methodologies for the 106-mile ocean dumping site (Env. Processes)
- o Conduct a multimedia risk assessment for the disposal of dredged material (Env. Processes)
- o Report on predictive methods for the removal of metals and problem organics for ocean discharge (Engineering)
- o Report on Application and Verification of a Protocol for Field Exposure Effects Assessment for Designated Areas of Concern in the Great Lakes (Env. Processes)

##### Objective 3: Evaluation of Innovative and Alternative (I/A) Technologies, Sludge Management Alternatives and Toxicity Reduction Methods and Technology

- o Criteria documents for pathogens and chemicals in sludge (Sci. Assessment)
- o Development and refinement of risk assessment methods for sludge contaminants (Sci. Assessment)
- o Provision of quality assurance support for the self-monitoring discharge monitoring report program (Monitoring)
- o A report on the Occurrence of Microorganisms in Distribution and Marketing of Sludge Products (Health)
- o Regional I/A Technology transfer seminars (Engineering)
- o Reports on updated actual capital and operation and maintenance costs for small community technologies (Engineering)

##### 1986 PLANNED OUTPUTS

=====

##### Objective 1: Develop the Scientific Data to Support a Water Quality Based Approach to Pollution Control

- o Determination of the adequacy of two short-term chronic toxicity tests in assessing effluent toxicity (Env. Processes)

- o Evaluation of chemical monitoring methods and field trials of protocols designed to measure site-specific aspects of water quality (Monitoring)
- o Technical support to complete the recreational water quality criteria (Health)
- o Revision of Average Daily Intake (ADIs) calculations for 65 water quality criteria documents (Sci. Assessment)

Objective 2: Develop Scientific Data Needed to Support Environmentally Sound Ocean Disposal, Estuarine and Great Lakes Program

- o Conduct a correlation analysis of the biological effects (toxicity) to contaminant gradients in a designed area of concern in the Great Lakes (Env. Processes)
- o Evaluation of the biological effects and engineering methodology performance for at-sea incineration (Env. Processes)
- o Development of methods for conduct of a wasteload allocation of sewage sludge at the 106-mile ocean disposal site (Env. Processes)
- o Report on partitioning of metals and organics in wastewater during treatment for ocean discharge (Engineering)

Objective 3: Evaluation of Innovative and Alternative (I/A) Technologies, Sludge Management Alternatives and Toxicity Reduction Methods and Technology

- o Final methodologies for preliminary hazard indices for landfilling of municipal sludge and for chemical and pathogen risk assessment criteria in sludge (Sci. Assessment)
- o Reports on new and improved alternative on-site system design, costs, and performance (Engineering)
- o Evaluation of the toxicity of major chemicals found in sludge (Health)

1985 ACTUAL OUTPUTS

Objective 1: Develop Scientific Data to Support a Water Quality Based Approach to Pollution Control

- o Report on techniques for assessing complex effluents in receiving waters (Monitoring)
- o Development of aquatic life water quality criteria documents for aluminum, cyanide, lead, mercury, cadmium, copper, ammonia, chlorine and arsenic (Env. Processes)
- o Completion of the Health section of the technical support document for water quality based toxics control (Health)

Objective 2: Develop Scientific Data Needed to Support Environmentally Sound Ocean Disposal, Estuarine and Great Lakes Programs

- o Documentation manuals for a three dimensional physical transport model and a three dimensional hydrodynamic model for use in the Great Lakes (Env. Processes)
- o Evaluation of effects and exposure assessment methods to determine the applicability of these procedures for use in a dredged material disposal hazard assessment (Env. Processes)
- o Examination of the effects of pollutant interactions on sediment toxicity (Env. Processes)

Objective 3: Evaluation of Innovative and Alternative (I/A) Technologies, Sludge Management Alternatives and Toxicity Reduction Methods and Technology

- o Development of an accumulation system for the analysis of purgeable and extractable organics in water (Env. Processes)
- o Report on the health effects from land application of sludge (Health)
- o Feasibility study for risk assessment of pathogens in sludge (Sci. Assessment)

## WATER QUALITY

### Water Quality Research

#### Budget Request

The Agency requests a total of \$24,384,600 supported by 311.7 total workyears for 1987, a decrease of \$3,337,100 and a decrease of 10.6 total workyears from 1986. Of the request, \$16,884,600 will be for the Salaries and Expenses appropriation and \$7,500,000 will be for the Research and Development appropriation, an increase of \$765,900 and a decrease of \$4,103,000, respectively.

#### Program Description

This program involves the following objectives:

Objective 1: Develop the Scientific Data to Support a Water Quality Based Approach to Pollution Control. This research will provide the scientific base to help states develop site-specific standards and to conduct use-attainability analyses.

Objective 2: Develop the Scientific Data Needed to Support Environmentally Sound Ocean Disposal, Estuarine and Great Lakes Programs. This activity develops and validates protocols needed by EPA for predicting and evaluating impacts from ocean disposal practices. This research program also evaluates, measures and develops predictive tools needed for understanding the distribution of pollutants and resulting effects on water quality and aquatic life through aquatic food chains of the Great Lakes ecosystems. The program also provides critical information for the development of responsive and scientifically valid estuarine programs.

Objective 3: Evaluation of Innovative and Alternative (I/A) Technologies, Sludge Management Alternatives and Toxicity Reduction Methods and Technology. The wastewater research program provides the technical information and engineering assistance needed by EPA and municipalities for the development and implementation of regulations and guidance for disposal of sludge, and control of pollution from municipal treatment plants to bring plants into compliance with state discharge permits. This program also provides the research in industrial wastewater characterization, control technology, quality assurance and monitoring systems needed to support the National Pollution Discharge Elimination System (NPDES).

#### SCIENTIFIC ASSESSMENT

##### 1987 Program Request

The Agency requests a total of \$685,800 supported by 6.0 total workyears for this program, of which \$302,800 will be for the Salaries and Expenses appropriation and \$383,000 will be for the Research and Development appropriation. This represents an increase of \$13,100 and \$297,500, respectively, and no change in total workyears. The increase will support our efforts to expedite the promulgation of sludge regulations under Section 405 of the Clean Water Act (CWA).

Develop the Scientific Data to Support a Water Quality Based Approach to Pollution Control. The program will provide support to the program office, Regions and States for update/modification/implementation of human health criteria on a site-specific basis for ambient water quality as well as provide assistance for evaluation of local health hazards from exposure to chemical pollutants and pollutant mixtures. The program will also provide the Office of Water Regulations and Standards with revised ambient water quality criteria and health assessments for 301(g) variance requests.

Evaluation of Innovative and Alternative (I/A) Technologies, Sludge Management Alternatives and Toxicity Reduction Methods and Technology. The program will provide technical support in the development and implementation of regulations for the management of sludge under Section 405(d) of the CWA as well as provide assistance in the development of criteria for the assessment of hazard and risk from exposure to sludge contaminants including both chemicals and pathogens.

#### 1986 Program

In 1986, the Agency is allocating a total of \$375,200 supported by 6.0 total workyears for this program, of which \$289,700 is from the Salaries and Expenses appropriation and \$85,500 is from the Research and Development appropriation.

The 1986 program is completing methodologies for chemical and pathogen risk assessment criteria in sludge and developing a methodology for preliminary hazard indices for disposal of municipal sludge.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$361,000 supported by 6.0 total workyears for this program, of which \$285,900 was from the Salaries and Expenses appropriation and \$75,100 was from the Research and Development appropriation.

In 1985, site-specific health hazard evaluations were performed and water quality criteria modifications developed. A feasibility study for risk assessment of pathogens in sludge was completed and methods and data for calculating hazard indices for chemicals in sludges were developed.

#### MONITORING SYSTEMS AND QUALITY ASSURANCE

##### 1987 Program Request

The Agency requests a total of \$2,744,600 supported by 53.4 total workyears for this program, of which \$2,719,600 will be for the Salaries and Expenses appropriation and \$25,000 will be for the Research and Development appropriation. This represents an increase of \$95,600 and a decrease of \$795,400, respectively, and no change in total workyears. The increase in Salaries and Expenses reflects adjustments to the 1986 base as part of government-wide deficit reductions. The decrease in Research and Development reflects a pilot effort to externalize quality assurance (QA) costs. This effort will involve charging of fees to public and private users for QA services (e.g., quality control check samples).

Develop the Scientific Data to Support a Water Quality Based Approach to Pollution Control. Activities will be carried out to develop and standardize methods for assessment of ambient water quality. The program will also provide field tested protocols designed to measure and monitor water quality, evaluate biological monitoring techniques and evaluate a generic approach for the chemical measurement of toxic organics and inorganics in ambient and non-point sources.

Evaluation of Innovative and Alternative (I/A) Technologies, Sludge Management Alternatives and Toxicity Reduction Methods and Technology. The Discharge Monitoring Report-Quality Assurance (DMRQA) Support Program will be continued to maintain and improve the quality of self-monitoring DMRQA data submitted to the States and EPA by the 7,000 major dischargers within the NPDES. The equivalency program will continue to encourage analytical methods development by the private sector.



#### 1986 Program

In 1986, the Agency is allocating a total of \$3,444,400 supported by 53.4 total workyears for this program, of which \$2,624,000 is from the Salaries and Expenses appropriation and \$820,400 is from the Research and Development appropriation.

In 1986, the Agency is evaluating chemical monitoring methods and field trials of protocols designed to measure site-specific aspects of water quality. In addition, this program provides cost-effective monitoring methods for the measurement of chemicals and biological parameters required in the National Pollution Discharge Elimination System (NPDES) program and in the assessment of ambient water quality.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$3,442,300 supported by 55.7 total workyears for this program, of which \$2,748,300 was from the Salaries and Expenses appropriation and \$694,000 was from the Research and Development appropriation.

In 1985, this program published several significant toxicity and virology measurement methods documents such as the Manual on the Measurement of Chronic Toxicity of Effluents to Freshwater Organisms and the Report on Techniques for Assessing Complex Effluents in Receiving Waters.

#### HEALTH EFFECTS

##### 1987 Program Request

The Agency requests a total of \$2,515,400 supported by 27.8 total workyears for this program, of which \$1,515,400 will be for the Salaries and Expenses appropriation and \$1,000,000 will be for the Research and Development appropriation. This represents an increase of \$119,200 and a decrease of \$277,000, respectively, and no change in total workyears. The increase in Salaries and Expenses reflects enhancement of the in-house research program. The decrease in Research and Development reflects the completion of the evaluation of toxic effects of chemicals in sludge.

Develop the Scientific Data to Support a Water Quality Based Approach to Pollution Control. Health effects bioassays will be field evaluated for use in setting NPDES permits based on protecting human health. These bioassays will be designed to determine quantitatively the potential risk of carcinogenic and target organ effects in humans. A microbial water quality indicator relating the quality of shellfish growing waters to public health problems will be developed.

Evaluation of Innovative and Alternative (I/A) Technologies, Sludge Management Alternatives and Toxicity Reduction Methods and Technology. Microbiological research data on the level and risk of pathogens that may cause disease in humans will be developed. Data will be provided on the feasibility of conducting an epidemiology project on the effects of sludge distribution and marketing on human health risks.

#### 1986 Program

In 1986, the Agency is allocating a total of \$2,673,200 supported by 27.8 total workyears for this program, of which \$1,396,200 is from the Salaries and Expenses appropriation and \$1,277,000 is from the Research and Development appropriation.

The use of bioassays to develop water quality-based pollution controls are being evaluated in 1986. The Tier I carcinogenesis bioassay is being confirmed and will be used to evaluate the toxicity of several waste streams. Research begun in 1985 to measure microbial indicators in shellfish growing waters is being evaluated in 1986. Evaluations are being completed of the toxicity of major chemicals found in sludge.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,699,700 supported by 24.4 total workyears for this program, of which \$1,313,500 was from the Salaries and Expenses appropriation and \$1,386,200 was from the Research and Development appropriation.

Several important reports were published which include: A Report on the Health Effects from Land Application of Sludge, a Report on the Health Effects from Exposure to Pathogens in Wastewater Aerosols, and the Health Section of the Technical Support Document for Water Quality Based Toxics Control.

#### ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

##### 1987 Program Request

The Agency requests a total of \$6,243,000 supported by 40.5 total workyears for this program, of which \$2,351,000 will be for the Salaries and Expenses appropriation and \$3,892,000 will be for the Research and Development appropriation. This represents an increase of \$14,500 and a decrease of 1,056,400, respectively, and a decrease of 2.0 total workyears. The increase in Salaries and Expenses reflects adjustments to the 1986 base as part of government-wide deficit reductions. The decrease in Research and Development reflects a reduction in industrial and municipal wastewater research due to the completion of several studies. The Agency believes that private industry is now in a position to perform many of the engineering evaluations and studies now provided by EPA.

Evaluation of Innovative and Alternative (I/A) Technologies, Sludge Management Alternatives and Toxicity Reduction Methods and Technology. More cost-effective treatment will be encouraged by evaluating innovative and alternative technologies. Information will be provided to the Office of Water on sludge management options to support regulation development and implementation by the States. Toxicity reduction evaluation (TRE) procedures and removal capabilities will be developed for the various municipal treatment processes. TRE is used by municipal permitting authorities to assist in issuing discharge permits to industry.

Develop the Scientific Data Needed to Support Environmentally Sound Ocean Disposal, Estuarine and Great Lakes Programs. Methodologies will be developed for measurement, description, movement and dynamics for the removal of metals and problem organics in municipal wastes to be ocean discharged.

##### 1986 Program

In 1986, the Agency is allocating a total of \$7,284,900 supported by 42.5 total workyears for this program, of which \$2,336,500 is from the Salaries and Expenses appropriation and \$4,948,400 is from the Research and Development appropriation.

This program provides the technical information and engineering assistance needed by EPA and municipalities for the development and implementation of regulations for disposal of sludge and innovative control of pollution from municipal treatment plants. The program is also focusing on conducting field validations of the toxicity reduction evaluation methodology (TRE). TRE is being used by municipal permitting authorities to assist in issuing discharge permits to industry.

## 1985 Accomplishments

In 1985, the Agency obligated a total of \$8,259,100 supported by 46.3 total workyears for this program, of which \$2,794,300 was from the Salaries and Expenses appropriation and \$5,464,800 was from the Research and Development appropriation.

Five emerging technology assessment reports and reports of results on five post-construction evaluations of I/A technologies were provided in support of the sludge management program.

## ENVIRONMENTAL PROCESSES AND EFFECTS

### 1987 Program Request

The Agency requests a total of \$11,261,000 supported by 176.0 total workyears for this program, of which \$9,561,000 will be for the Salaries and Expenses appropriation and \$1,700,000 will be for the Research and Development appropriation. This represents an increase of \$742,400 and a decrease of \$956,000, respectively, and a decrease of 8.6 total workyears. The increase in Salaries and Expenses reflects enhancement of the in-house research program. The decrease reflects the completion of a number of research projects related to aquatic life water quality criteria, biological integrity and incineration-at-sea.

Develop the Scientific Data to Support a Water Quality Based Approach to Pollution Control. Research will continue to develop methods to determine what uses are attainable in aquatic systems, and to work on integrating pollutant-specific control methods with whole toxicity testing procedures and best available technology (BAT) limits for use in permitting. Through a cooperative agreement we will participate with the People's Republic of China (PRC) in research and exchange information on the environmental processes and effects of pollution on freshwater organisms and water pollution fate and transport models.

Wetlands research will be initiated to study the wetlands values; determine the impact of wetlands on water quality; and assess the cumulative impacts of wetlands loss.

Evaluation of Innovative and Alternative (I/A) Technologies, Sludge Management Alternatives and Toxicity Reduction Methods and Technology. Research will continue to maintain and update the existing tape library and develop new analytical data bases of toxic pollutants found in wastewater.

Develop the Scientific Data Needed to Support Environmentally Sound Ocean Disposal, Estuarine and Great Lakes Programs. Hazard assessment protocols will be validated to assess better the impact of deep water ocean disposal. A multimedia risk assessment for dredged material will be completed and used in evaluating disposal options. A report will be completed on the transformation and fate of whole effluent toxicity which will be used in conducting wasteload allocations in estuaries.

### 1986 Program

In 1986, the Agency is allocating a total of \$11,474,600 supported by 184.6 total workyears for this program, of which \$8,818,600 is from the Salaries and Expenses appropriation and \$2,656,000 is from the Research and Development appropriation.

Hazard assessment protocols to assess better the impact of ocean disposal of wastes are being developed in 1986. Research on the marine component of a cross-media risk assessment is beginning.

## 1985 Accomplishments

In 1985, the Agency obligated a total of \$10,275,900 supported by 157.7 total workyears for this program, of which \$8,486,300 was from the Salaries and Expenses appropriation and \$1,789,600 was from the Research and Development appropriation.

In 1985 the major accomplishments included the development of aquatic life water quality criteria documents for aluminum, cyanide, lead, mercury, cadmium, copper, ammonia, chlorine and arsenic. Effects and exposure assessment procedures were evaluated to determine the applicability of these procedures for use in a dredged material disposal hazard assessment.

## GREAT LAKES

### 1987 Program Request

The Agency requests a total of \$934,800 supported by 8.0 total workyears for this program, of which \$434,800 will be for the Salaries and Expenses appropriation and \$500,000 will be for the Research and Development appropriation. This represents a decrease of \$218,900 and \$1,315,700, respectively, and no change in total workyears. The decrease reflects the completion of several studies on the effects of toxic pollutants along chemical gradients.

Develop the Scientific Data Needed to Support Environmentally Sound Ocean Disposal, Estuarine and Great Lakes Programs. Research will continue to develop and test methods to measure, describe and predict the sources, distribution, movement, dynamics and effects of organic toxic substances in Great Lakes areas of concern. A report will be completed on the acute and chronic toxicity of dioxin, furans and related compounds of concern in the Great Lakes. This program will also provide the International Joint Commission, Great Lakes National Program Office, Regions II, III and V and Great Lakes States with technical support and research data related to activities under the US/Canada Water Quality Agreement.

### 1986 Program

In 1986, the Agency is allocating a total of \$2,469,400 supported by 8.0 total workyears for this program, of which \$653,700 is from the Salaries and Expenses appropriation and \$1,815,700 is from the Research and Development appropriation.

The 1986 program is focusing on the impact and fate of toxic materials in areas of concern identified by the Great Lakes Water Quality Board. Emphasis is on in-place pollutant and chemical mass balance research.

## 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,311,800 supported by 10.0 total workyears for this program, of which \$970,400 was from the Salaries and Expenses appropriation and \$1,341,400 was from the Research and Development appropriation.

In 1985, this program prepared documentation manuals for a three dimensional physical transport model and a three dimensional hydrodynamic model for use in the Great Lakes.

# WATER QUALITY

## Comprehensive Estuarine Management

ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
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(DOLLARS IN THOUSANDS)

### PROGRAM

Comprehensive Estuarine  
Management.

Research & Development	\$3,962.5
TOTAL	\$3,962.5

### TOTAL:

Research & Development	\$3,962.5
------------------------	-----------

Comprehensive Estuarine Management	TOTAL \$3,962.5
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## WATER QUALITY

### Comprehensive Estuarine Management

#### 1987 Program Request

The Agency requests no resources for this activity in 1987. This program is supported under the Water Quality Monitoring and Analysis subactivity in the Abatement and Control function.

#### 1986 Program

The Agency is allocating no resources under this subactivity for 1986. This program is supported under the Water Quality Monitoring and Analysis subactivity in the Abatement and Control function.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$3,962,500, all of which was from the Research and Development appropriation.

The Agency, in coordination with NOAA, assisted State and local agencies dealing with Long Island Sound, Narragansett Bay, Buzzards Bay, and Puget Sound during 1985 in the formulation of work programs to carry out studies to determine wasteload sources and characteristics, to locate and quantify nutrient and toxic problem areas, and to identify the management and data needs for the design of control and abatement programs.

On the basis of nutrient and toxics abatement experiences gained in the Chesapeake Bay Program and the Great Lakes program, the Agency developed a national estuarine policy and generic estuarine program guidance document for use by State and local officials in program design and implementation.

Workyear support for this program is described under the Water Quality Monitoring and Analysis subactivity.

# **Abatement and Control**

**SECTION TAB**





ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# WATER QUALITY

## Water Quality And Grants Program Management

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
-----								
(DOLLARS IN THOUSANDS)								
-----								
PROGRAM								
-----								
Water Quality Management								
Salaries & Expenses	\$3,563.5	\$3,722.9	\$3,723.1	-\$160.0	\$3,563.1	\$3,783.6	\$220.5	
Abatement Control and Compliance	\$224.6	\$180.0	\$180.0	-\$7.7	\$172.3	\$171.0	-\$1.3	
TOTAL	\$3,788.1	\$3,902.9	\$3,903.1	-\$167.7	\$3,735.4	\$3,954.6	\$219.2	
Great Lakes Program								
Salaries & Expenses	\$1,124.5	\$1,071.8	\$1,071.8	-\$46.2	\$1,025.6	\$1,073.9	\$48.3	
Abatement Control and Compliance	\$5,413.7	\$3,897.3	\$3,897.3	-\$167.6	\$3,729.7	\$3,697.3	-\$32.4	
TOTAL	\$6,538.2	\$4,969.1	\$4,969.1	-\$213.8	\$4,755.3	\$4,771.2	\$15.9	
Chesapeake Bay Program								
Salaries & Expenses	\$899.4	\$839.7	\$839.7	-\$36.2	\$803.5	\$857.3	\$53.8	
Abatement Control and Compliance	\$12,507.9	\$9,250.0	\$9,250.0	-\$397.8	\$8,852.2	\$9,250.0	\$397.8	
TOTAL	\$13,407.3	\$10,089.7	\$10,089.7	-\$434.0	\$9,655.7	\$10,107.3	\$451.6	
TOTAL:								
Salaries & Expenses	\$5,587.4	\$5,634.4	\$5,634.6	-\$242.4	\$5,392.2	\$5,714.8	\$322.6	
Abatement Control and Compliance	\$18,146.2	\$13,327.3	\$13,327.3	-\$573.1	\$12,754.2	\$13,118.3	\$364.1	
Water Quality And Grants Program Management	TOTAL	\$23,733.6	\$18,961.7	\$18,961.9	-\$815.5	\$18,146.4	\$18,833.1	\$686.7

# WATER QUALITY

## Water Quality And Grants Program Management

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
----- (DOLLARS IN THOUSANDS) -----							
PERMANENT WORKYEARS -----							
Water Quality Management	67.7	69.4	69.8		69.8	71.8	2.0
Great Lakes Program	17.4	15.8	18.0		18.0	18.0	
Chesapeake Bay Program	4.7	9.5	8.6		8.6	8.6	
TOTAL PERMANENT WORKYEARS	89.8	94.7	96.4		96.4	98.4	2.0
TOTAL WORKYEARS -----							
Water Quality Management	73.3	76.6	76.6		76.6	76.6	
Great Lakes Program	21.7	20.0	20.0		20.0	20.0	
Chesapeake Bay Program	8.1	10.0	10.0		10.0	10.0	
TOTAL WORKYEARS	103.1	106.6	106.6		106.6	106.6	

## WATER QUALITY

### Water Quality and Grants Program Management

#### Budget Request

The Agency requests a total of \$18,833,100 supported by 106.6 workyears for 1987, an increase of \$686,700 and no change in total workyears for 1987. Of the request, \$5,714,800 is for the Salaries and Expenses appropriation and \$13,118,300 is for the Abatement, Control and Compliance appropriation, an increase of \$322,600 and a decrease of \$364,100, respectively.

#### Program Description

The program areas under this subactivity include:

Water Quality Management -- This program includes management of State financial assistance under Sections 106, 205(g) (nonconstruction grants management), 205(j), 208, and 303 of the Clean Water Act. Proposed Administration amendments to the Clean Water Act eliminate new funding under 205(j) after October 1, 1985, and restrict use of 205(g) money. The nonpoint source (NPS) program encourages other Federal agencies to support development of cost-effective State and local programs to control nonpoint sources of pollution in priority waters.

Great Lakes Program -- This program provides assistance in implementing U.S. programs in support of the U.S. - Canada Great Lakes Water Quality Agreement. A major focus of the program is the measurement of ambient conditions in the Great Lakes in order to determine compliance with the objectives of the Agreement. The monitoring portions of the program measure water quality trends and the effectiveness of remedial responses to emerging pollution problems.

Chesapeake Bay Program -- As a result of the Chesapeake Bay Water Quality Study, the Agency is committing significant resources to restore Bay water quality. The Agency is assisting the Bay States and the District of Columbia in implementing activities to control nutrient and toxic effects in the Bay. In addition to maintaining the Bay Liaison Office in Annapolis, the Agency will provide cost sharing grant assistance to the States for implementing nutrient and toxic controls. The Agency conducts detailed monitoring and modeling studies to assist in the cleanup effort.

#### WATER QUALITY MANAGEMENT

##### 1987 Program Request

The Agency requests a total of \$3,954,600 supported by 76.6 total workyears for this program, of which \$3,783,600 will be for the Salaries and Expenses appropriation and \$171,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$220,500 and a decrease of \$1,300, respectively, with no change in total workyears. The increase in Salaries and Expenses reflects increased operating costs.

EPA will continue to negotiate and manage grants which specify the performance expected by the States, commonly known as performance-based grants. This will include negotiating and tracking annual program priorities and work commitments to ensure that Federal and State funds are meeting priority point and nonpoint source control needs. EPA will work with selected States to analyze priority waterbody lists and conduct workshops on using the lists to focus grant resources on critical water quality problems. Although EPA expects all pre-1985 Level of Effort (LOE) deficits to be repaid by the end of 1987, Regional oversight will continue to assure that LOE deficit problems do not reoccur. Headquarters will conduct five workshops with the Regions to ensure that grant work programs are effectively

coordinated to improve management of grant funds. The guidance on grant financial management will be updated. The program will continue to provide positions for Water Management Division Directors.

Grants totaling \$52,100,000, a decrease of \$10,009,300 from 1986, are being requested for award under Section 106 of the Clean Water Act to support State and Interstate Water Pollution Control programs. EPA will target the funds to compliance and enforcement of pretreatment programs; issuance/ reissuance of permits including Best Available Technology (BAT) and water quality-based permits for toxics control; development of groundwater protection strategies and programs; and continue Publicly Owned Treatment Works (POTW) compliance under the National Municipal Policy. Limited funding for management of nonpoint source controls in high priority basins also will be made.

The Administration has proposed major revisions to Section 205(j) of the Clean Water Act which authorizes various planning activities. These revisions would discontinue funding under 205(j) after October 1, 1985. No funds are requested for 1987.

EPA will build on intra- and interagency planning in 1985 and 1986 for control of nonpoint source pollution primarily from agriculture and silviculture. This includes negotiating and assuring implementation of new Memoranda of Understanding (MOU) that direct existing resources and programs of three other Federal agencies to expand the use of NPS controls. The U.S. Departments of Agriculture and Defense and the Bureau of Land Management are the key agencies EPA will work with during 1987. EPA staff will also work to assure that Federal field programs directly assist specific State and local NPS implementation projects in priority waters. This assistance will include training of State and local water quality staff and landowners in the design and implementation of NPS controls such as reduced tillage methods and pesticide/nutrient management.

#### 1986 Program

In 1986, the Agency is allocating a total of \$3,735,400 supported by 76.6 workyears for this program, of which \$3,563,100 is for the Salaries and Expenses appropriation and \$172,300 is for the Abatement, Control and Compliance appropriation.

EPA's ongoing focus is to coordinate Federal and State water quality priorities and programs. The primary objectives in 1986 are to complete development of State procedures for instituting waterbody priorities as a means to focus State resources on critical problems. Final policy on State preparation and use of priority waterbodies to focus 106 funding will be issued and a series of workshops held. Review of grant applications and mid/end-of-year program reviews will emphasize financial management of grants. The automated information system will be operational in the Regions in 1986 for tracking actual outputs of the States against their commitments. The system will also assist EPA in conducting program reviews.

During 1986, the States, with EPA's assistance, will use the State-by-State assessment to identify and fill data gaps, to rank nonpoint source problems and develop management programs in selected priority waters. EPA's ongoing interagency effort to target existing Federal resources will continue with USDA on agriculture-related NPS problems, and to a lesser extent, on silviculture-related problems.

#### 1985 Accomplishments

In 1985, the Agency obligated \$3,788,100 supported by 73.3 total workyears for this program, of which \$3,563,500 was from the Salaries and Expenses appropriation and \$224,600 was from the Abatement, Control and Compliance appropriation. The focus for this program in 1985 has been on technical assistance to States for complying with requirements of Section 106 grants and to Regions on management of 106/205(j) grants.

Assistance to States included providing direct advice to determine LOE for four States, issuing guidance documents on complying with 106 requirements, and developing a policy on performance-based 106/205(j) grants for all States. Assistance was provided to the Regions through workshops on strengthening management of 106/205(j) grants and developing an automated information system to improve Regional grants management.

In 1985, EPA convened a Federal/State/Local Nonpoint Source Task Force which recommended a National Policy and developed individual Agency and Regional Strategies to ensure implementation of NPS practices to address priority problems. EPA received a report from the States providing the first State-by-State documentation of NPS problems, the status of State NPS programs and a description of successful control approaches.

## GREAT LAKES PROGRAM

### 1987 Program Request

The Agency requests a total of \$4,771,200 supported by 20.0 total workyears for this program, of which \$1,073,900 will be for the Salaries and Expenses appropriation and \$3,697,300 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$48,300 and a decrease of \$32,400, respectively, with no change in total workyears. The increase in Salaries and Expenses reflects adjustments to the 1986 base as part of the government-wide deficit reductions. The decrease in Abatement, Control and Compliance reflects improvements in data management.

The Great Lakes National Program Office (GLNPO) will continue to provide leadership in meeting the U.S. obligations under the 1978 Great Lakes Water Quality Agreement with Canada and under the 1983 Phosphorus Control supplementary agreement, and will continue to support the activities of the International Joint Commission (IJC). It will be responding to information requests and providing technical assistance to Headquarters and the State Department on official Canadian requests and notes concerning U.S. Great Lakes policies. Staff support to the IJC's Water Quality Board and its committees will continue to ensure that U.S. views and policies are adequately represented. GLNPO will provide any required technical support in the reconsideration or renegotiation of the Water Quality Agreement anticipated to begin in 1986.

The Program will continue its work on Great Lakes monitoring planning and programming as required by Annex 11 of the Water Quality Agreement with Canada. Surveys of the Lakes will be conducted in cooperation with State and Canadian agencies to determine the annual variability of ambient phosphorus concentrations and the levels and trends in metals and conventional pollutant parameters. A surveillance program to detect toxic substances in Great Lakes fish and sediments will be continued for the tributaries and harbors. The results will be analyzed and reported to the States for regulatory follow-up.

The results of the monitoring activities, including water, fish, sediment, and atmospheric deposition data, will provide the information necessary to assess compliance with the Water Quality Agreement objectives, to evaluate effectiveness of control programs, and to identify emerging problems. Attention in sediment sampling will continue to be focused on the problem of polluted sediment in the 30 U.S. "Areas of Concern" identified by the Water Quality Board. Remedial action plans will be completed for the remaining 25 areas and alternative abatement technologies will be identified and evaluated. The Upper Great Lakes Connecting Channels (the Detroit and St. Clair Rivers and the St. Marys River) final report will be published to provide needed information on sediments and on toxics transport.

The U.S. Phosphorus Reduction Plan, submitted to the IJC in 1986 for Lakes Erie and Ontario, will be revised and updated based on plan implementation activities by the States, which are being carried out with GLNPO oversight and assistance.

GLNPO will begin the assessment of toxic pollutant sources, including draft assessments of ground water and pesticide sources, as a basis for the development of a mass balance for toxics.

#### 1986 Program

The Agency is allocating a total of \$4,755,300 supported by 20.0 total workyears for this program, of which \$1,025,600 is from the Salaries and Expenses appropriation and \$3,729,700 is from the Abatement, Control and Compliance appropriation.

GLNPO is continuing to conduct a wide range of monitoring activities and laboratory analysis with particular emphasis on in-place toxics and atmospheric deposition of toxics. The second and final season of monitoring work, including water and sediment sampling, for the Upper Great Lakes Connecting Channels Study is being completed and a draft final report is to be written.

The U.S. is reviewing the Phosphorus Reduction Plan called for in the 1983 Phosphorus Control Supplement to Annex 3 of the Water Quality Agreement. The final review is to be completed prior to the plan's submittal to the International Joint Commission.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$6,585,100 supported by 21.7 total workyears for this program, of which \$1,124,500 was from the Salaries and Expenses appropriation and \$5,413,700 was from the Abatement, Control and Compliance appropriation.

The Upper Great Lakes Connecting Channels Study continued during 1985. This year was the first of two field seasons of the bi-national ecosystem analysis during which sampling of the connecting channels' water and sediment was conducted. The National Oceanographic and Atmospheric Administration and the Fish and Wildlife Service contributed to the effort.

In 1985, the U.S. prepared the first draft of the U.S. Phosphorus Reduction Plan called for in the 1983 Phosphorus Control Supplement to Annex 3 of the Water Quality Agreement. The U.S. planning has been based on State plans developed by Indiana, Michigan, Ohio, Pennsylvania and New York with the assistance of the GLNPO. In addition, negotiations with Canada were completed to allocate the additional phosphorus load reduction needed for Lake Ontario.

GLNPO continued its sampling network and laboratory activities. Water chemistry, biota, sediment, and air analyses that are required by the Water Quality Agreement were carried out. This work was used as the basis for the Biennial Report on Great Lakes Water Quality completed in 1985. In addition, new water quality surveillance plans for the individual lakes were completed during the year.

#### CHESAPEAKE BAY PROGRAM

##### 1987 Program Request

The Agency requests a total of \$10,107,300 supported by 10.0 workyears for this program of which \$857,300 will be for the Salaries and Expenses appropriation and \$9,250,000 will be for the Abatement, Control, and Compliance appropriation. This represents an increase of \$53,800 and \$397,800 respectively, with no change in total workyears. The increase in Salaries and Expenses reflects adjustments to the 1986 base as part of the government-wide deficit reductions. The increase in Abatement, Control and Compliance reflects expanding monitoring and computer modeling needs.

In 1987, the Agency will continue working with the Bay States on the use of grant funds to update and implement the elements of the Bay Restoration and Protection Plan begun during FY 1986. Of importance will be matching grants for the implementation of the nonpoint source control plan elements, including those in identified critical areas. In addition the focus of assistance to the States will include integration of point source controls to improve abatement and permit reviews to improve compliance rates. Water quality monitoring of pilot areas will be used in conjunction with water quality models to evaluate results of Best Management Practices (BMP) implementation and to develop quantitative relationships between waste removal from the Bay and improvement of water quality.

Following the update of the 1980 Bay watershed model to 1985, it will be used with the two dimensional steady-state model to determine dissolved oxygen and nutrient levels. Complementing this work will be the continuing development of a three dimensional time-variable model for developing waste load allocations.

The Agency will continue to provide technical and administrative staff support to the Chesapeake Bay Implementation Committee and Executive Council. Coordination functions will be carried out with the States, other Federal Agencies, and other Bay management agencies to ensure continued progress is made in restoring Bay water quality. The Agency's support for monitoring the mainstem of the Bay will continue in concert with the States' focus on the major tributaries. Continued support will be provided for maintaining and improving the Chesapeake Bay data system.

#### 1986 Program

The Agency is allocating a total of \$9,655,700 supported by 10.0 total work-years for this program, of which \$803,500 is from the Salaries and Expenses appropriation and \$8,852,200 is from the Abatement, Control and Compliance appropriation.

During 1986, the Agency is awarding demonstration grants to the Bay States to implement the recommendations of the Chesapeake Bay Restoration and Protection Plan of 1985. These 50 percent cost sharing grants emphasize nonpoint source control efforts and will be targeted on projects which support the long-term need for reducing loadings of toxics and nutrients. Assistance is being primarily provided to identify critical farm units within the sub-basins, develop plans and schedules for implementing Best Management Practices, define outreach programs to encourage farmer participation, and develop long-term comprehensive implementation programs. The objective is to demonstrate the effectiveness of Best Management Practices, in critical areas so that more farmers will adopt the practices.

Under the policy direction of the Executive Council and the guidance of the Implementation Committee and its five subcommittees, the staff of the Chesapeake Bay Liaison office is framing management strategies reflecting both point and non-point source controls. It is also overseeing contracts for the construction of computer models that will help establish quantitative relationships between waste loads and Bay water quality. Data establishing these relationships is being provided by historical data, collected during the research phase of the Bay Program, and by data being collected through special data searches and by carefully targeted water quality monitoring programs.

The Chesapeake Bay Liaison Office is coordinating the activities with other Federal agencies engaged in the Bay program and is sponsoring programs to inform citizen groups of Bay problems and efforts underway to address them.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$13,407,300 supported by 8.1 total workyears for this program, of which \$899,400 was from the Salaries and Expenses appropriation and \$12,507,900 was from the Abatement, Control and Compliance appropriation.



This was the first year of a four year Administration commitment to carry out cost sharing grants in the program. Cost sharing grants were targeted at reducing the loadings of nutrients and toxics in critical sub-basins in the Bay States.

The efforts of the National Oceanic and Atmospheric Administration, the U.S. Geological Survey, the Corps of Engineers, the U.S. Department of Agriculture, and the Fish and Wildlife Service of the Department of the Interior were coordinated through the Liaison Office.

Other activities of the Liaison Office included complementing the tributary monitoring activities of the States by supporting the monitoring of the Bay's mainstem; refining the water quality model to assess the impact of alternative control options; and maintaining the program's computer center, which stores the program's extensive data base. The Chesapeake Bay Restoration and Protection Plan was completed in September of 1985 and is being used to set the stage for future years efforts.



# WATER QUALITY

## Effluent Standards & Guidelines

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
Effluent Standards & Guidelines							
Salaries & Expenses	\$3,925.0	\$3,699.4	\$3,667.4	-\$157.6	\$3,509.8	\$2,774.6	-\$735.2
Abatement Control and Compliance	\$5,320.5	\$4,400.0	\$4,400.0	-\$189.2	\$4,210.8	\$3,462.4	-\$748.4
	\$9,245.5	\$8,099.4	\$8,067.4	-\$346.8	\$7,720.6	\$6,237.0	-\$1,483.6
TOTAL:							
Salaries & Expenses	\$3,925.0	\$3,699.4	\$3,667.4	-\$157.6	\$3,509.8	\$2,774.6	-\$735.2
Abatement Control and Compliance	\$5,320.5	\$4,400.0	\$4,400.0	-\$189.2	\$4,210.8	\$3,462.4	-\$748.4
Effluent Standards & Guidelines TOTAL	\$9,245.5	\$8,099.4	\$8,067.4	-\$346.8	\$7,720.6	\$6,237.0	-\$1,483.6
PERMANENT WORKYEARS							
-----							
Effluent Standards & Guidelines	67.3	66.9	66.9		66.9	47.0	-19.9
TOTAL PERMANENT WORKYEARS	67.3	66.9	66.9		66.9	47.0	-19.9
TOTAL WORKYEARS							
-----							
Effluent Standards & Guidelines	74.1	71.0	71.0		71.0	50.0	-21.0
TOTAL WORKYEARS	74.1	71.0	71.0		71.0	50.0	-21.0

## WATER QUALITY

### Effluent Standards and Guidelines

#### Budget Request

The Agency requests a total of \$6,237,000 supported by 50.0 total workyears for 1987, a decrease of \$1,483,600 and 21.0 total workyears from 1986. Of the request, \$2,774,600 will be for the Salaries and Expenses appropriation and \$3,462,400 will be for the Abatement, Control and Compliance appropriation, a decrease of \$735,200 and \$748,400, respectively.

#### Program Description

Effluent Standards and Guidelines -- This program includes establishing effluent limitations for industries discharging directly to waterways and indirectly through Publicly Owned Treatment Works (POTWs). Effluent standards and guidelines are promulgated under the authority of Sections 301, 304, 306, 307, and 501 of the Clean Water Act. Through this program, the Agency establishes a number of different kinds of effluent standards and guidelines.

Best Available Technology Economically Achievable (BAT) limitations generally represent the best existing performance in the industrial category or subcategory. The Act establishes BAT as the principal national means of controlling the direct discharge of toxics and nonconventional pollutants into navigable waters. Best Conventional Pollution Control Technology (BCT), the basis for limiting discharges of conventional pollutants from existing sources, is not an additional limitation, but replaces BAT for the conventional pollutants. New Source Performance Standards (NSPS) are based on the best available demonstrated technology. Pretreatment Standards for Existing Sources (PSES) are designed to prevent the discharge of pollutants which pass through, interfere with, or are otherwise incompatible with the POTW's treatment process or chosen sludge disposal method. The similar regulation for new plants is Pretreatment Standards for New Sources (PSNS).

The Act required the achievement by July 1, 1984 of effluent limitations requiring application of BAT for non-conventional pollutants and classes of pollutants which Congress declared toxic under Section 307(a) of the 1972 Act. Likewise, NSPS and pretreatment standards were redirected toward toxic pollutant controls.

#### EFFLUENT STANDARDS AND GUIDELINES

##### 1987 Program Request

The Agency requests a total of \$6,237,000 supported by 50.0 total workyears for this program, of which \$2,774,600 will be for the Salaries and Expenses appropriation and \$3,462,400 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of \$735,200 and \$748,400, respectively, and a decrease of 21.0 total workyears. The decrease in both appropriations and in total workyears reflect the Agency's progress in developing effluent standards and guidelines.

In 1987, the program will continue analyses of eight unregulated industries with known toxic discharges to determine the need for regulation and/or guidance for Regional and State permit writers. The program will review two regulated categorical industries discharging large amounts of toxic pollutants. Priorities for these industries are based on the results from the Resource Conservation and Recovery Act (RCRA) Section 3018, Domestic Sewage Study, discussions with permit

writers and municipalities and an EPA environmental management study. The program will promulgate BAT regulations for gold placer mining, and for volatile toxics in the pesticide category, and will issue final rules for Best Conventional Technology on the remaining reserved primary industry categories.

The program will provide engineering, economic, and statistical support to post-promulgation negotiation, litigation, remand/repair, and petition review efforts, as needed, to defend the guidelines. The Agency reviews petitions filed by outside groups with the courts and attempts to resolve issues out of court. Some are successfully resolved; others are litigated, which may require the Agency to respond to court remands. In 1987, the program expects post-promulgation support to continue on nine categories.

The program will continue to provide technical assistance, including engineering, economic and statistical support for Regional and State permit writers, through approximately 20 workshops, and will provide data on industrial pollutant discharges, treatment technologies and wastewater characteristics as needed. The program will perform the engineering, environmental, and associated activities for responding to variance requests, with an emphasis on Fundamentally Different Factors (FDF) and 301(g) variances referred by the Regional Offices.

#### 1986 Program

In 1986 the Agency is allocating a total of \$7,720,600 supported by 71.0 total workyears for this program, of which \$3,509,800 is from the Salaries and Expenses appropriation and \$4,210,800 is from the Abatement, Control and Compliance appropriation.

The program is promulgating BAT regulations for the foundries, and the organic chemicals, plastics and synthetic fibers category; and issuing final BCT rules on pharmaceuticals, pulp and paper, and the secondary industries.

The program will conduct site visits and engineering evaluations on four non-regulated categories studied in 1985: ferroalloy manufacturing facilities, hazardous waste treatment facilities, hospitals, and the transportation industry; and will begin to update effluent data on solvent barrel and oil reclaimers and industrial laundries. The program will also evaluate additional regulated industries discharging large amounts of toxic pollutants. These analyses will be used to determine the need for the issuance of regulations or guidance documents to assist permit writers in controlling toxic discharges.

The program will continue to emphasize engineering, economic and statistical support to Regional and State permit writers in reissuing expired permits which will incorporate BAT. The program is conducting additional workshops on permit issuance and application of effluent regulations, including compliance assistance for small businesses in the foundry industry. Other efforts include issuance of guidance manuals to assist in implementing categorical pretreatment standards for enforcing toxic pollutant control on industrial dischargers to Publicly Owned Treatment Works (POTWs); writing new source discharge permits; responding to variances and evidentiary hearings; and assisting States in reducing their major and minor permit backlogs.

Post-promulgation support will continue on ten contested regulations, including negotiations, litigation support activities, and proposed or final amendments to categorical regulations.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$9,245,500 supported by 74.1 total workyears for this program, of which \$3,925,000 was from the Salaries and Expenses appropriation and \$5,320,500 was from the Abatement, Control and Compliance appropriation.

The program promulgated effluent standards and guidelines for 4 industries on court-ordered schedules; nonferrous metals forming, nonferrous metals (phase II), plastics molding and forming, and pesticides. Extensive development work was completed for final regulations for the organic chemicals and plastics and synthetic fibers category. The program also proposed regulations for offshore oil and gas production.

Post-promulgation negotiations support took place in 1985 on eight contested regulations, including negotiations for five settlements. Additional support activities involved proposal and/or promulgation of settlement agreement regulations on five categories, and litigation support for two categories.

In conjunction with the Office of Water Enforcement and Permits, the program provided engineering, economic, and statistical support to Regional and State permit writers through 13 technical workshops and seminars for Regional, State, and industry representatives. The program also reviewed draft permit reports and assisted the States on Best Professional Judgment (BPJ) issues for the coal remining category by developing an economic/environmental model for use by permit writers.

The program completed literature and record reviews of four non-regulated industries identified as major dischargers of toxic pollutants by the Domestic Sewage Study required under RCRA Section 3018, and by the Regions and EPA's Integrated Environmental Management Program: ferroalloy manufacturing facilities, hazardous waste treatment facilities, hospitals, and the transportation industry. The program also began evaluating five regulated industries discharging large amounts of highly toxic pollutants to determine the need for issuance of regulations or guidance documents to assist permit writers. These categories included paint, ink, onshore and coastal oil and gas, and textiles.

# WATER QUALITY

## Grants Assistance Programs

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
(DOLLARS IN THOUSANDS)								
PROGRAM								
Clean Lakes Program								
Abatement Control and Compliance	\$5,000.0		\$5,000.0	-\$215.0	\$4,785.0		-\$4,785.0	
TOTAL	\$5,000.0		\$5,000.0	-\$215.0	\$4,785.0		-\$4,785.0	
Control Agency Resource Supplementation (Section 106)								
Abatement Control and Compliance	\$61,313.4	\$64,900.0	\$64,900.0	-\$2,790.7	\$62,109.3	\$52,100.0	-\$10,009.3	
TOTAL	\$61,313.4	\$64,900.0	\$64,900.0	-\$2,790.7	\$62,109.3	\$52,100.0	-\$10,009.3	
Training Grants (Section 104)								
Abatement Control and Compliance	\$216.0		\$250.0	-\$10.8	\$239.2		-\$239.2	
TOTAL	\$216.0		\$250.0	-\$10.8	\$239.2		-\$239.2	
TOTAL:								
Abatement Control and Compliance	\$66,529.4	\$64,900.0	\$70,150.0	-\$3,016.5	\$67,133.5	\$52,100.0	-\$15,033.5	
Grants Assistance Programs	TOTAL	\$66,529.4	\$64,900.0	\$70,150.0	-\$3,016.5	\$67,133.5	\$52,100.0	-\$15,033.5

## WATER QUALITY

### Grants Assistance Programs

#### Budget Request

The Agency requests a total of \$52,100,000 for grants under the Abatement, Control and Compliance Appropriation for 1987, a decrease of \$15,033,500 from 1986.

#### Program Description

The program areas under this subactivity include:

Clean Lakes Program -- Section 314 of the Clean Water Act sets forth the principal administrative and technical requirements for developing a national program to enhance the quality of freshwater lakes. The Clean Lakes regulation in February, 1980 established an operational program of financial and technical assistance to the States to assist them in implementing methods and procedures to protect and restore the quality of their publicly owned freshwater lakes.

Control Agency Resource Supplementation (Section 106) -- Section 106 grants supplement State resources for water pollution control programs. They are negotiated annually with 50 States, 7 Territories, and 6 Interstate compact agencies. Funds are used to carry out a wide range of water quality programs, including permit issuance, enforcement, monitoring, construction grants management, water quality planning and standards, wasteload allocations, nonpoint source control program management, pretreatment, oil and hazardous materials spill response, and other priority programs.

States also receive financial assistance for water quality program activities under Sections 205(g) and 205(j) of the Clean Water Act as reserves from their annual Construction Grants allotment under the Construction Grants appropriation. Funding is provided under Section 205(g) for construction grants management in delegated States and under Section 205(j) for water quality planning and standards activities. Proposed Administration amendments will eliminate new funding under Section 205(j) after October 1, 1985, and restrict use of 205(g) grants.

Training Grants (Section 104) -- These grants provide training assistance to institutions of higher education and other public or private agencies and institutions to meet professional manpower needs.

#### CLEAN LAKES PROGRAM

##### 1987 Program Request

In 1987, the Agency requests no funds for the Clean Lakes program. In past years the Agency has developed and demonstrated lake restoration techniques and assisted States in classifying lakes, identifying techniques for restoring the level of water quality needed to maintain or enhance uses, and implementing cleanup and control projects. Since the Agency has provided guidance to the States on maintaining clean lakes, it believes that the States are now able to address lake restoration needs, along with other local priorities, under their existing water quality management programs.



### 1986 Program

In 1986, the Agency is allocating a total of \$4,785,000 under the Abatement, Control and Compliance appropriation for grants for the Clean Lakes program. The funds provided are being used only for existing projects with an emphasis on those projects which can be completed with 1986 funds. The Agency expects to award 25 grants for improving conditions in publicly owned freshwater lakes.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$5,000,000 from the Abatement, Control and Compliance appropriation under the Clean Lakes program to help complete 30 existing projects.

### CONTROL AGENCY RESOURCE SUPPLEMENTATION (SECTION 106)

#### 1987 Program Request

The Agency requests a total of \$52,100,000 under the Abatement, Control and Compliance appropriation, a decrease of \$10,009,300. This decrease reflects State progress in reducing major permit backlogs, in approving local pretreatment programs, and in developing State groundwater strategies.

Section 106 grants will provide funding assistance for operation of joint Federal/State water pollution control programs for 63 State, interstate, and territorial agencies. This grant will be included in a legislative proposal for block grants designed to give States more flexibility and autonomy in administering environmental programs. States are expected to continue to issue industrial permits for Best Available Technology (BAT), municipal permits and water quality-based permits for toxics control. Continued emphasis in 1987 is anticipated for activities to improve compliance by dischargers with their National Pollutant Discharge Elimination System (NPDES) permits and on enforcement of pretreatment programs. To this end, a total of 416 major permits are expected to be issued or reissued by the States and 2243 compliance inspections at major facilities are expected to be conducted. Additionally, funds are expected to be devoted to assisting States as they develop and/or implement groundwater protection strategies and programs. A limited amount of Section 106 funds are expected to be devoted to management of nonpoint source programs in high priority basins.

### 1986 Program

In 1986, the Agency is allocating \$62,109,300 for Section 106 grants under the Abatement, Control and Compliance appropriation.

Assistance to the States in 1986 is emphasizing issuance of industrial permits for Best Available Technology (BAT) and municipal permits, especially for major facilities. Because of the major potential for water quality impairment and sludge contamination, the focus will also be on improving compliance of Publicly Owned Treatment Works (POTWs), especially those required to administer pretreatment programs under the National Municipal Policy. Over 1,000 major NPDES permits will be issued or reissued by the States, which should work toward elimination of the NPDES States' major permit backlog, and approximately 6,300 compliance inspections of majors will be conducted. EPA expects one additional State to accept NPDES permitting authority in 1986.

States and territories will develop groundwater protection strategies or, where States have strategies, support State groundwater program development and implementation activities. Remaining Section 106 funds will be used to fund other negotiated priority State program management needs such as nonpoint source program implementation. Also, some priority planning, ambient and source standards, and monitoring of toxic and conventional pollutants will continue to be funded.

### 1985 Accomplishments

In 1985, the Agency obligated \$61,313,400 for Section 106 grants under the Abatement, Control, and Compliance appropriation. Several States have developed NPDES program modifications to assume pretreatment, Federal facility, and general permitting responsibilities. Thirty-seven States had approved NPDES programs and States had 1,278 approved municipal/pretreatment programs in 1985.

Approximately 1800 major NPDES permits including toxics controls, were issued or reissued by the States. Nearly 6,000 compliance inspections of majors were conducted, and the States took increasing responsibility in compliance activities. States developed analytical capabilities to support increased emphasis on water quality-based permitting, toxics control, and requests for permit variances.

Finally, almost all States were developing or implementing groundwater management plans based on guidance published in early 1985, and twenty-five States used Section 106 grants to manage nonpoint source programs.

### TRAINING GRANTS (SECTION 104)

#### 1987 Program Request

The Agency requests no funds for these grants in 1987. The Agency believes that sufficient interest and opportunities exist for people to enter environmental professions without Federal support.

#### 1986 Program

The Agency is allocating \$239,200 from the Abatement, Control and Compliance appropriation to support graduate level academic training in environmental sciences and engineering at 27 universities.

### 1985 Accomplishments

In 1985, the Agency obligated \$216,000 from the Abatement, Control and Compliance appropriation for training grants. These funds were used to support graduate level academic training in environmental sciences and engineering at 27 universities.

# WATER QUALITY

## Water Quality Strategies Implementation

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
PROGRAM							
Dredge and Fill							
Salaries & Expenses	\$2,632.3	\$3,116.7	\$2,930.8	-\$126.0	\$2,804.8	\$2,944.5	\$139.7
Abatement Control and Compliance	\$471.9	\$1,653.3	\$1,653.3	-\$71.1	\$1,582.2	\$1,653.3	\$71.1
TOTAL	\$3,104.2	\$4,770.0	\$4,584.1	-\$197.1	\$4,387.0	\$4,597.8	\$210.8
Ocean Disposal Permits							
Salaries & Expenses	\$2,061.3	\$2,134.2	\$2,168.2	-\$93.1	\$2,075.1	\$2,491.9	\$416.8
Abatement Control and Compliance	\$2,130.5	\$6,797.2	\$6,797.2	-\$292.2	\$6,505.0	\$6,579.2	\$74.2
TOTAL	\$4,191.8	\$8,931.4	\$8,965.4	-\$385.3	\$8,580.1	\$9,071.1	\$491.0
Environmental Emergency Response & Prevention							
Salaries & Expenses	\$1,707.2	\$2,781.7	\$2,546.7	-\$109.7	\$2,437.0	\$2,587.4	\$150.4
Abatement Control and Compliance	\$1,633.7	\$1,848.0	\$1,948.0	-\$83.8	\$1,864.2	\$1,848.0	-\$16.2
TOTAL	\$3,340.9	\$4,629.7	\$4,494.7	-\$193.5	\$4,301.2	\$4,435.4	\$134.2
Standards & Regulations							
Salaries & Expenses	\$4,085.4	\$4,349.0	\$4,347.5	-\$187.1	\$4,160.4	\$4,130.7	-\$29.7
Abatement Control and Compliance	\$2,364.2	\$2,515.3	\$2,515.3	-\$108.2	\$2,407.1	\$2,165.3	-\$241.8
TOTAL	\$6,449.6	\$6,864.3	\$6,862.8	-\$295.3	\$6,567.5	\$6,296.0	-\$271.5
TOTAL:							
Salaries & Expenses	\$10,486.2	\$12,381.6	\$11,993.2	-\$515.9	\$11,477.3	\$12,154.5	\$677.2
Abatement Control and Compliance	\$6,600.3	\$12,813.8	\$12,913.8	-\$555.3	\$12,358.5	\$12,245.8	-\$112.7

# Water Quality

## Water Quality Strategies Implementation

		ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
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(DOLLARS IN THOUSANDS)								
Water Quality Strategies Implementation	TOTAL	\$17,086.5	\$25,195.4	\$24,907.0	-\$1,071.2	\$23,835.8	\$24,400.3	\$564.5
PERMANENT WORKYEARS								
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Dredge and Fill		63.5	68.6	68.8		68.8	68.8	
Ocean Disposal Permits		38.9	42.4	44.3		44.3	52.3	8.0
Environmental Emergency Response & Prevention		41.3	60.8	60.9		60.9	61.2	0.3
Standards & Regulations		86.5	89.3	87.1		87.1	84.7	-2.4
TOTAL PERMANENT WORKYEARS		230.2	261.1	261.1		261.1	267.0	5.9
TOTAL WORKYEARS								
-----								
Dredge and Fill		66.2	75.3	75.3		75.3	75.3	
Ocean Disposal Permits		41.0	45.6	47.0		47.0	55.4	8.4
Environmental Emergency Response & Prevention		46.4	68.1	68.0		68.0	68.0	
Standards & Regulations		94.5	95.5	95.5		95.5	91.6	-3.9
TOTAL WORKYEARS		248.1	284.5	285.8		285.8	290.3	4.5

## WATER QUALITY

### Water Quality Strategies Implementation

#### Budget Request

The Agency requests a total of \$24,400,300 supported by 290.3 total workyears for 1987, an increase of \$564,500 and an increase of 4.5 total workyears from 1986. Of this request, \$12,154,500 will be for the Salaries and Expenses appropriation and \$12,245,800 will be for the Abatement, Control and Compliance appropriation, an increase of \$677,200 and a decrease of \$112,700 respectively.

#### Program Description

The program areas under this subactivity include:

Dredge and Fill -- The focus of the Section 404 Program will be to ensure that the most significant problems in wetlands and other aquatic systems are identified and appropriately addressed through implementation of improved scientific and administrative methods for dealing with those problems. Headquarters will develop guidance and revise regulations and procedures to ensure sound, effective, and consistent methods to identify and address the most significant environmental problems supported by an active enforcement and compliance program. Regions will use their authorities to review and comment on public notices of permit applications and, when necessary to protect significant resource values, will elevate permits, restrict or prohibit discharges, and establish jurisdictional boundaries to ensure a strong, efficient, and consistent program. Regions will assist in the identification of critical wetlands requiring immediate protective action, will strengthen efforts to have an effective 404 compliance and enforcement program, and will continue their work in transferring the Section 404 Program to interested and qualified States.

Ocean Disposal Permits -- The ocean disposal program includes the regulation of ocean disposal by outfalls, dumping, incineration at sea, designation of disposal sites, development of ocean disposal policies, and participation in interagency programs that deal with the development and protection of ocean resources. The Agency's ocean disposal programs are authorized by the Marine Protection, Research and Sanctuaries Act (MPRSA) of 1972 and the Clean Water Act, as amended, and are consistent with the mandatory provisions of the current Convention on Prevention of Marine Pollution by Dumping of Wastes and Other Matter, known as the London Dumping Convention. This program supports both Headquarters and Regional staff.

To carry out ocean disposal permitting functions, the Administrator of EPA is authorized to regulate the disposal of all materials except dredged material, which is regulated by the Corps of Engineers. MPRSA prohibits the transportation and dumping in ocean water of chemical, biological, and radiological warfare agents and high level radioactive materials. EPA has statutory responsibility for designating all ocean dumping sites, including those for dredged material.

Environmental Emergency Response and Prevention -- This program will continue to maintain an around-the-clock capability to receive notice of and respond to major incidents of accidental releases of oil and other petroleum products. (Spills of hazardous substances are covered under Superfund.) Removal actions will be directed by Regional personnel at serious incidents where the responsible party is unidentifiable, refuses to clean up, or is incapable of providing adequate response and where State or local authorities lack appropriate expertise or resources.

The cleanup monitoring program will continue to provide incentive for adequate removal by responsible parties, as well as serve as a mechanism for drawing State and local agencies into directing removals themselves. The Agency's focus in 1986

will be on encouraging State and local governments to assume a greater share of the responsibility for responding to oil spills. Federal resources, therefore, will be concentrated on major actions where State, local, or private response is not feasible.

Standards and Regulations -- This program implements water quality-based controls by setting water quality standards pursuant to Section 303, 304(a), and 307(a) of the Clean Water Act (CWA). EPA and the States use the water quality criteria adopted in the standards as the basis for water quality-based controls. EPA publishes guidance on water quality criteria applicable to freshwater, marine, and estuarine environments and sediments. Under Section 405, the Agency develops and publishes regulations providing guidelines for the disposal and utilization of sludge. This program also includes Clean Lakes grants management. Both Headquarters and Regional programs are supported by this program element.

## DREDGE AND FILL

### 1987 Program Request

The Agency requests a total of \$4,597,800 supported by 75.3 total workyears for this program, of which \$2,944,500 will be for the Salaries and Expenses appropriation and \$1,653,300 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$139,700 and \$71,100, respectively, no change in total workyears. The increases reflect adjustments to the 1986 base as part of government-wide deficit reductions.

The major focus of the Headquarters program will be to ensure that the most significant national problems in wetland and other aquatic systems are identified and protection increased appropriately through development of consistent and effective national policies and related guidance, implementation of revised regulations and procedures for State program assumption, increased cooperative effort with other Federal Agencies and through implementation of improved scientific and technical methods of addressing significant problems. This will increase program predictability and efficiency for the regulated public. Regions will continue to use their authorities to protect significant resource values. Regions will also increase their enforcement and compliance efforts and continue to encourage the transfer of the Section 404 Program to interested and qualified States under the revised regulations.

### 1986 Program

In 1986, the Agency is allocating a total of \$4,387,000 supported by 75.3 total workyears for this program, of which \$2,804,800 is from the Salaries and Expenses appropriation and \$1,582,200 is for the Abatement, Control and Compliance appropriation.

Headquarters will develop a system for identifying the most significant problems involving wetlands and other aquatic areas, improve scientific and technical methods of addressing them, and finalize revisions to the 404 State Program regulations. Regions will initiate action to address the most significant environmental problems (for example, the loss of bottomland hardwood wetlands). Regions will also strengthen efforts to transfer the 404 Program to the States and to ensure general permits are environmentally sound.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$3,104,200 supported by 66.2 total workyears for this program, of which \$2,632,300 was from the Salaries and Expenses appropriation and \$471,900 from the Abatement, Control and Compliance appropriation.

Headquarters initiated development of a 1986 EPA Program Management plan, and proposed revised 404 State Program regulations. Regions reviewed over 6,000 Section 404 permits, ensured general permits were soundly developed, continued to work with States on 404 program assumption, and exercised EPA's authorities under the Clean Water Act to prevent unacceptable discharges of dredged and fill material.

## OCEAN DISPOSAL PERMITS

### 1987 Program Request

The Agency requests a total of \$9,071,100 supported by 55.4 total workyears for this program, of which \$2,491,900 will be for the Salaries and Expenses appropriation and \$6,579,200 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$416,800 and \$74,200, respectively, and an increase of 8.4 in total workyears. The increases reflect expanded emphasis on deep water site management and ocean incineration permitting.

The Agency will be completing development of a comprehensive revision to the ocean dumping regulations and development of program guidance and technical protocols as required. The comprehensive revision will be responsive to two court cases, amendments to legislation, and the knowledge and experience gained through program management.

Further evaluations will be conducted in fully assessing the long term impacts of incineration-at-sea. With the promulgation of the incineration-at-sea regulation in 1986, there will be increased site designation activity, permitting activity and a corresponding increase for comprehensive monitoring activity.

The Agency will be continuing to review and issue permits for municipal and industrial ocean disposal. This activity includes evaluating and characterizing waste samples on a case-by-case basis. The Agency will also continue to review dredged material disposal permits issued by the Corps of Engineers, and will continue the accelerated preparation of environmental assessments to support site designations for those dredged material disposal sites not covered by the National Wildlife Federation (NWF) Consent Decree.

The ongoing site management responsibilities will increase as more interim dredged material disposal sites are designated as final sites and there is increasing usage of deep water sites for municipal and industrial disposal operations and incineration-at-sea burns. There will be a further emphasis on data management as the number of continuing and comprehensive site monitoring programs increases through the operation of the dredged material sites with final designations and of the deep water disposal and burn sites.

The Agency plans to resolve issues on regulatory, operational and administrative issues and institute user fees for this program in 1987. Fees received from the Ocean Disposal Permits program will not affect the Budget Authority requested for the program in 1987.

### 1986 Program

In 1986, the Agency is allocating a total of \$8,580,100 supported by 47.0 total workyears for this program, of which \$2,075,100 is from the Salaries and Expenses appropriation and \$6,505,000 is from the Abatement, Control, and Compliance appropriation.

The program is continuing to develop the ocean dumping regulations. These regulations respond to a 1981 court decision, which ruled that the Agency must consider the comparative environmental effects of land versus ocean disposal in con-

sidering an ocean disposal permit application. That court decision also requires the Agency to provide for balancing the environmental effects of ocean disposal methods, while meeting specific environmental criteria established by the Statute.

In the area of site designation and monitoring, the program has scheduled 26 surveys of interim and existing ocean disposal sites for site designation purposes and to determine the environmental impacts of disposal. Two deep water sites within the New York 106-mile site is being monitored in accordance with a comprehensive monitoring plan.

Of particular concern in 1986 is the development and implementation of the incineration-at-sea regulation, paralleled by the implementation of the research strategy for this program. Additional ports of loading and potential incineration sites are being surveyed for designation in the Atlantic and Pacific Oceans. Comprehensive incineration site monitoring programs are being implemented to assure adequate baseline information for designation and/or to assess continuing protection of the marine environment through adequate site management. A permit has been proposed for a research burn. The Agency is establishing a comprehensive monitoring assessment and impact analysis program to review the data from the research burn to support authorization of subsequent burns. A major element of the impact analysis program is the development of a predictive model to be used in assessing environmental impacts from incineration operations.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$4,191,800 supported by 41.0 total workyears for this program, of which \$2,061,300 was from the Salaries and Expenses appropriation and \$2,130,500 was from the Abatement, Control and Compliance appropriation.

The majority of the extramural resources were for site surveys, development of environmental assessments, and site designation, and the review, processing, and issuance of permits for ocean disposal. This includes evaluating and characterizing waste samples provided by facilities applying for permits. The waste characteristics are examined for suitability for ocean disposal at existing sites on a case-by-case basis.

The Agency conducted monitoring surveys of existing and interim designated ocean disposal sites. Samples were collected and analyzed to determine and monitor the environmental impacts of waste disposal at the designated ocean sites. Environmental Impact Statements were issued on ocean disposal sites as required under the National Wildlife Federation Consent Decree. Additional site designation work was begun on interim designated material disposal sites not covered under the Consent Decree.

Substantial work was undertaken for the incineration-at-sea program. Regulations were proposed in February 1985. EPA held 5 public hearings and conducted numerous informational briefings around the country. Over 500 separate comments were received during the comment period which closed in June 1985. In addition, EPA produced a research strategy to support the program and initiated efforts to implement the research strategy.

Work was initiated on revision of the ocean dumping regulations.

#### ENVIRONMENTAL EMERGENCY RESPONSE AND PREVENTION

##### 1987 Program Request

The Agency requests a total of \$4,435,400 supported by 68.0 total workyears for this program, of which \$2,587,400 will be for the Salaries and Expenses appropriation and \$1,848,000 will be for the Abatement, Control, and Compliance



appropriation. This reflects an increase of \$150,400 and a decrease of \$16,200, respectively, and no change in total workyears. The increase is due to higher operating costs.

The Agency has a 24-hour-a-day capability to respond to notifications of accidental spills or threats of releases. Federal removal is directed at major incidents where the responsible party is unidentifiable, refuses to clean up, or is incapable of providing timely and adequate removal and where the States and local authorities lack the necessary expertise, equipment, or funding.

Spill notifications will be processed to determine what, if any, response is required. The Federal government will direct response operations at 120 major spills and will monitor on-scene at 400 removals conducted by responsible parties or State and local authorities to ensure adequate response.

Federal regulations require the implementation of a Spill Prevention, Control, and Countermeasure (SPCC) plan at oil storage facilities and transfer points that could reasonably be expected to spill a significant amount of oil into the waters of the United States. Regional staff, with assistance from contractor personnel, will conduct compliance inspections at selected facilities included in the SPCC program, in an effort to reduce the frequency and volume of releases that occur. An estimated 1,550 SPCC inspections will be conducted.

The Agency also maintains an Environmental Response Team (ERT) to provide Regional and State personnel with response training and on-site technical and operational assistance at complex emergency incidents. The ERT is staffed by personnel with a high degree of expertise in the areas of spill control and removal, spill sampling and analysis techniques, and damage assessments.

Regional response capability is augmented through the Technical Assistance Team (TAT) contract. This contract provides contractor workyears to assist Regional staff and the ERT in responding to Clean Water Act section 311 spills and environmental emergencies.

#### 1986 Program

In 1986 the Agency is allocating a total of \$4,301,200 supported by 68.0 total workyears to this program, of which \$2,437,000 is from the Salaries and Expenses appropriation and \$1,864,200 is from the Abatement, Control, and Compliance appropriation.

Headquarters will ensure overall management of the program and the Regions will be responsible for managing response actions. The oil component of the ERT will provide special engineering and technical advice at any unusually large or complex spills. Regional personnel will be available on a 24-hour basis to respond to the estimated 9,000 notifications received by the National Response Center of accidental releases of oil and other petroleum products. The Agency will provide on-scene monitoring at 400 removals undertaken by responsible parties or State and local authorities and will direct removals at 120 major oil incidents. An estimated 1,550 SPCC inspections will be conducted.

#### 1985 Accomplishments

In 1985 the Agency obligated \$3,340,900 supported by 46.4 total workyears for this program, of which \$1,707,200 was from the Salaries and Expenses appropriation and \$1,633,700 was from the Abatement, Control, and Compliance appropriation. Regional offices received and screened over 9,000 notifications of oil spill releases. Of these, the Agency directed removals at 58 major oil spills and responded on-scene at 370 non-Federally funded incidents. In addi-

## STANDARDS AND REGULATIONS

### 1987 Program Request

The Agency requests a total of \$6,296,000 supported by 91.6 total workyears for this program, of which \$4,130,700 will be for the Salaries and Expenses appropriation and \$2,165,300 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of \$29,700 and \$241,800, respectively, and a decrease of 3.9 in total workyears. Resource decreases reflect the completion of sediment studies and the issuance of sediment criteria in 1986.

State water quality standards serve as the regulatory basis for treatment controls that go beyond technology-based treatment requirements. The Agency will continue to work with States to identify water quality limited stream segments where standards revisions may be warranted. The revised water quality standards regulation specifies that States must identify specific water bodies where toxic pollutants are known or suspected to be causing use impairment. To ensure that water quality standards are based on adequate data and information, and that they meet the requirements of the Clean Water Act, the Regional Offices will continue assisting States in collecting data and determining where site-specific criteria development may be warranted.

The program will continue to work with States in integrating the development of site-specific criteria into the States' standards review and revision process. The program will provide guidance and assistance to the States to resolve intra- and interstate issues affecting toxic pollutant permit controls, and continue to develop guidance to help States establish and implement approaches for applying numerical or narrative toxic standards in permitting programs.

In 1987, the program will continue its primary emphasis on developing and issuing water quality criteria and water quality advisories for freshwater and marine aquatic life to help States determine appropriate protection levels for toxic and other pollutants. Water quality advisories provide screening levels for pollutants based on available data for both aquatic life and human health effects. State adoption of criteria for toxic pollutants is a requirement under the revised water quality standards regulation.

The Agency will promulgate technical criteria and management practices for the reuse or disposal of municipal sewage sludge in 1987, and the program will shift from regulation development to regulation implementation.

### 1986 Program

In 1986, the Agency is allocating a total of \$6,567,500 and 95.5 total work-years for this program, of which \$4,160,400 is from the Salaries and Expenses appropriation and \$2,407,100 is from the Abatement, Control and Compliance appropriation.

The Agency continues its emphasis on the development and issuance of criteria and water quality advisories primarily for toxic and non-conventional pollutants in fresh and marine environments. In 1985, the Agency initiated work on developing scientific methods for screening pollutants in sediment, and in 1986, is planning to propose sediment criteria for four pollutants, two organic chemicals and two metals.

The program is working with the States to implement the revised water quality standards regulation with special emphasis on adopting toxic criteria and upgrading water body uses to fishable and swimmable standards. Greater priority is being given to examining the adequacy of any narrative criteria for toxics and identifying the method by which the State intends to regulate point source discharges of toxic pollutants. Regional Offices continue to review State-adopted additions or revisions to water quality standards. EPA is assisting the States in the use of site-specific criteria and use attainability protocols.

The Agency is developing regulations for the disposal and utilization of municipal sewage sludge under Section 405 of the CWA. The program will propose methodologies for developing numerical limits, management practices and technological controls of sludge, to develop environmental profiles for contaminants of concern, and to issue technical summary documents for each sludge disposal option. This effort will provide the technical basis for conducting intermedia analyses and for proposal of technical sewage sludge regulations in 1986.

The Agency will continue to provide management of the Clean Lakes projects and assist States and local agencies in overseeing lake restoration project funding.

#### 1985 Accomplishments

In 1985, the Agency obligated \$6,449,600 supported by 94.5 total workyears for this program, of which \$4,085,400 was from the Salaries and Expenses appropriation and \$2,364,200 was from the Abatement, Control and Compliance appropriation.

The program published final documents for nine freshwater criteria, ten marine criteria and a revised methodology, and proposed a new criteria for dissolved oxygen. Screening level procedures and a long term workplan were developed for sediment criteria, and the microbiological criteria was proposed. Planning and development of water quality advisories was initiated. Environmental profiles and an overall summary for forty-nine possible pollutants was published for the sewage sludge criteria/regulations. The variance policy of the revised water quality standards regulation was updated and guidance on anti-degradation was published. Technical workshops were conducted on implementation of the standards regulation, use attainability analyses, and development of site-specific criteria.

The Agency responded to hundreds of requests from all States for support in conducting use attainability analyses, setting site-specific criteria, and increasing the coverage of toxic pollutants in State standards. Water quality standards promulgation was proposed for Idaho and public hearings were conducted. The program continued management of the Clean Lakes program, which included reviewing and approving grant applications for existing Clean Lakes projects.



# WATER QUALITY

## Water Quality Monitoring & Analysis

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
-----								
(DOLLARS IN THOUSANDS)								
-----								
PROGRAM								
-----								
Coastal Environment Management								
Salaries & Expenses	\$336.2	\$311.3	\$1,704.5	-\$73.2	\$1,631.3	\$1,686.8	\$55.5	
Abatement Control and Compliance		\$4,000.0	\$7,675.0	-\$330.0	\$7,345.0	\$6,195.7	-\$1,149.3	
TOTAL	\$336.2	\$4,311.3	\$9,379.5	-\$403.2	\$8,976.3	\$7,882.5	-\$1,093.8	
Water Quality Monitoring & Analysis								
Salaries & Expenses	\$8,170.4	\$7,778.8	\$7,848.7	-\$337.4	\$7,511.3	\$7,436.2	-\$75.1	
Abatement Control and Compliance	\$4,661.9	\$3,815.6	\$3,815.6	-\$164.0	\$3,651.6	\$2,891.9	-\$759.7	
TOTAL	\$12,832.3	\$11,594.4	\$11,664.3	-\$501.4	\$11,162.9	\$10,328.1	-\$834.8	
TOTAL:								
Salaries & Expenses	\$8,506.6	\$8,090.1	\$9,553.2	-\$410.6	\$9,142.6	\$9,123.0	-\$19.6	
Abatement Control and Compliance	\$4,661.9	\$7,815.6	\$11,490.6	-\$494.0	\$10,996.6	\$9,087.6	-\$1,909.0	
Water Quality Monitoring & Analysis	TOTAL	\$13,168.5	\$15,905.7	\$21,043.8	-\$904.6	\$20,139.2	\$18,210.6	-\$1,928.6

# WATER QUALITY

## Water Quality Monitoring & Analysis

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
-----							
PERMANENT WORKYEARS							
-----							
Coastal Environment Management	5.9	6.0	41.1		41.1	41.1	
Water Quality Monitoring & Analysis	166.4	153.3	154.0		154.0	150.3	-3.7
TOTAL PERMANENT WORKYEARS	172.3	159.3	195.1		195.1	191.4	-3.7
TOTAL WORKYEARS							
-----							
Coastal Environment Management	6.4	6.0	44.8		44.8	44.8	
Water Quality Monitoring & Analysis	187.1	170.8	170.8		170.8	163.5	-7.3
TOTAL WORKYEARS	193.5	176.8	215.6		215.6	208.3	-7.3

## WATER QUALITY

### Water Quality Monitoring and Analysis

#### Budget Request

The Agency requests a total of \$18,210,600 supported by 208.3 workyears for 1987, a decrease of \$1,928,600 and 7.3 total workyears from 1986. Of the request, \$9,123,000 will be for the Salaries and Expenses appropriation and \$9,087,600 will be for the Abatement, Control and Compliance appropriation, a decrease of \$19,600 and \$1,909,000 respectively.

#### Program Description

The program areas under this subactivity include:

Coastal Environment Management -- This program element integrates all Clean Water Act activities related to coastal waters including estuarine management (previously budgeted under Comprehensive Estuarine Management) and 301(h) marine discharge waivers (previously budgeted under Permit Issuance). This program provides assistance to support those State and local management activities required to protect or to restore the estuarine zone and continental shelf ecosystem, including water quality, balanced indigenous populations of marine biota, and other beneficial uses, from the adverse impacts of toxic, nutrient and other pollutants. This includes 1) supporting State and local studies for selected estuarine initiatives, 2) making determinations on (and monitoring) ocean discharge waiver requests, and 3) evaluating all ocean discharges against 403(c) criteria. This program supports both Headquarters and Regional staffs.

Water Quality Monitoring and Analysis -- This program supports biological, chemical, and physical evaluations of water quality to assess water quality status and trends, identify water quality problems and their causes, and determine cost-effective levels of control required to meet local water quality objectives. The program emphasizes effective technical guidance and assistance to the States, which are primarily responsible for collecting, analyzing, and interpreting monitoring data. These activities and requirements are authorized by Sections 104, 106, 303, and 305 of the Clean Water Act. This program supports both Headquarters and Regional staffs.

#### COASTAL ENVIRONMENT MANAGEMENT

##### 1987 Program Request

The Agency requests a total of \$7,882,500 supported by 44.8 total workyears for this program, of which \$1,686,800 will be for the Salaries and Expenses appropriation and \$6,195,700 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$55,500 and a decrease of \$1,149,300, respectively and no change in total workyears. The increase in Salaries and Expenses reflects adjustments to the 1986 base as part of the government-wide deficit reductions. The decrease in Abatement, Control and Compliance reflects the completion of two estuarine studies.

In 1987 the Agency will continue to manage technical support contracts for the review of 301(h) marine discharge waiver applications and monitoring programs. Most decisions will be completed by the end of the year and waiver recipients will begin implementing water quality monitoring programs. The focus of the program will have shifted to the managing and analyzing of monitoring data from waiver recipients.

The Agency will begin providing technical support for the preparation of 403(c) Ocean Discharge Criteria Evaluations for general permits for oil and gas operations on the outer continental shelf.

Technical support will continue for the national estuarine programs. This comprehensive estuarine approach includes quantifying pollutant loads, assessing impacts on estuarine water quality and resources, and providing recommendations on priority trade-offs of load reduction between sources so that EPA and States can take the appropriate steps to restore or maintain and, where possible, enhance environmental quality. The approach uses participatory management and joint decision making among Federal, State, and local authorities, as well as the public, to define the nature and extent of environmental problems, analyze appropriate data, relate ambient water quality conditions to land based pollutant loads, gather monitoring data and develop monitoring plans, and recommend alternative management actions to abate environmental problems.

It is anticipated that two of the national estuarine studies started in 1985 will be nearing completion as public discussion of their draft master plans begins. Two new estuarine initiatives will be selected on the basis of national environmental priorities.

#### 1986 Program

The Agency is allocating a total of \$8,976,300 supported by 44.8 total work-years in this program, of which \$1,631,300 is from the Salaries and Expenses appropriation and \$7,345,000 is from the Abatement, Control and Compliance appropriation.

During 1986, the estuarine management program is accelerating the integration of work products from 1985, including problem identification and assessment, pollutant source quantification, assessment of impacts on environmental quality, and specific action plans for priority problems identified. These are essential inputs for the monitoring programs and the development of comprehensive environmental master plans for Long Island Sound, Narragansett Bay, Buzzards Bay, and Puget Sound. The plans will balance pollution control levels between point and nonpoint sources, and will form the basis for implementing control actions to achieve environmental results.

The Agency, in coordination with National Oceanic and Atmospheric Administration (NOAA), is assisting selected State and local agencies in the development and implementation of estuarine studies and programs through financial assistance, both matching grants and contracts, and generic guidance developed on the basis of the Agency's experience in the Chesapeake Bay and Great Lakes Programs. The Agency is also developing a technology transfer system to aid the selected estuary programs and other estuarine initiatives, as appropriate, in the interchange of technical methodologies and program management techniques.

During 1986, 301(h) decisions will be accelerated to assure that National Municipal Policy Waiver recipients are implementing their monitoring programs and submitting monitoring data to the Agency for analysis.

#### 1985 Accomplishments

In 1985, the Agency obligated for the Comprehensive Estuarine Management activities in this program element a total of \$336,200, supported by 6.4 workyears for this program, all of which was from the Salaries and Expenses appropriation. The 301(h) activities in this program element were included in the Permit Issuance program element in 1985.

The Agency, in coordination with NOAA, assisted State and local agencies dealing with these four water bodies during 1985 in the formulation of work pro-



grams to carry out studies to determine wasteload sources and characteristics, to locate and quantify nutrient and toxic problem areas, and to identify the management and data needs for the design of control and abatement programs. EPA provided financial assistance through matching grants and contracts to carry out the studies. The overall schedule for completion of each estuary will vary depending on the complexity of the estuary and extent of previously completed work.

On the basis of nutrient and toxics abatement experiences gained in the Chesapeake Bay Program and the Great Lakes Program, the Agency developed a national estuarine policy and generic estuarine program guidance document for use by State and local officials in program design and implementation.

Under the Comprehensive Estuarine Management sub-activity in the Research and Development appropriation, \$3,962,500 was obligated for water quality research, sampling, monitoring, and assessment in this area. This was the initial funding provided to assist State and local agencies in developing programs for Long Island Sound, Narragansett Bay, Buzzards Bay, and Puget Sound to protect the critical ecosystems of these estuarine zones from land-generated nutrient and toxic pollutants.

#### WATER QUALITY MONITORING AND ANALYSIS

##### 1987 Program Request

The Agency requests a total of \$10,328,100 supported by 163.5 total workyears for this program, of which \$7,436,200 will be for the Salaries and Expenses appropriation and \$2,891,900 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of \$75,100 and \$759,700 respectively and a decrease of 7.3 total workyears. These decreases primarily reflect reduced emphasis on issuance of detailed technical guidance documents and the completion of the National Dioxin Study final report.

Many dischargers of toxic pollutants may need more stringent National Pollutant Discharge Elimination System (NPDES) permit limitations in order to meet State water quality standards. For this reason, a high priority of the program is to continue to assist States in developing water quality-based controls for toxic pollutants for NPDES permits. The program will continue to assist States and Regions in the use of biomonitoring techniques for assessing and controlling toxicity of effluents, and in the use of new interactive wasteload allocation (WLA) models for personal computers. The program will provide workshops on WLAs and will work with States on site-specific WLA projects. In addition, the Regions will continue technical reviews of State-submitted total maximum/daily loads (TMDLs) and WLAs.

The program will continue to improve the management and use of water quality information for purposes of selecting and analyzing problem waters. New methods such as biological survey techniques and computerized files will be developed and maintained for use by Regions and States in identifying and tracking waters. The program will also conduct additional pilot applications of data integration techniques with the States for their use in biennial Section 305(b) assessments and for WLAs.

The program will work actively with States to continue the shift of emphasis from routine monitoring of conventional pollutants to address aquatic toxicity and human health problems. The Regions will continue to assess water quality problems and conduct laboratory analyses at priority sites and work with States in identifying stream reaches that need water quality-based controls including WLAs.

The program will continue studies of bioaccumulative pollutants in fish tissue and contamination of sediments. In the 1984 Section 305(b) reports, several States reported detectable levels of toxic pollutants in fish tissue that exceeded Food

and Drug Administration (FDA) action levels, and reported other actions such as fish consumption advisories and bans. The Agency's bioaccumulation study is designed to characterize the nature and extent of fish tissue contamination. Sampling and statistical analysis will be completed by the end of 1987. Also, the program will initiate field sampling activities as part of a comprehensive national assessment of accumulation of toxic pollutants in sediments in order for EPA to deal with these difficult, unregulated contamination problems. The sediment study will evaluate the nature of the problem and its causes, and will investigate the technical, administrative, and legal aspects of alternatives for mitigating sediment contamination problems. The results of these studies will assist in focusing future regulatory control actions to reduce exposure to toxic pollutants. The program will continue its support of quality assurance (QA) for all monitoring activities and provide positions for the Environmental Services Division Directors.

#### 1986 Program

The Agency is allocating a total of \$11,162,900 supported by 170.8 total work-years for this program, of which \$7,511,300 is from the Salaries and Expenses appropriation and \$3,651,600 is from the Abatement, Control and Compliance appropriation.

The program is continuing to work with the States to implement the monitoring strategy which EPA updated in 1985 to emphasize improved information management to help target toxic pollutant monitoring. Regions will work with States to assure that State programs are directed to the important environmental problems and that water quality-based permits are developed where appropriate.

The program is providing technical support to States for developing water quality-based limitations and improving methods used to support State permit writers. The program will provide technical assistance in analyzing the State backlog of toxic pollutant samples. We will provide assistance to State permit writers in the use of biomonitoring techniques and in directly assessing the chronic and acute toxicity of discharges. Review of State WLAs and TMDLs will continue with special emphasis on areas where control decisions are most needed.

Headquarters is issuing further technical guidance and conduct additional workshops on WLAs and biomonitoring approaches. These methodologies will be extended to key types of estuarine and marine waters. In addition, field tests of the technical guidance will be performed in cooperation with other Headquarters offices, Regions and States.

Analysis and evaluation of the results of the National Dioxin Study was completed in December 1985 and a final report is being prepared for Congress. The program is conducting follow-up assessments in some locations to identify the specific sources of dioxin problems and will initiate appropriate clean-up, health advisories or other actions. Also, sampling and analysis will begin in 1986 on a study of other dioxin isomers and on other persistent and bioaccumulative pollutants in fish tissue. The study will utilize samples collected during the dioxin study and new samples collected at areas of suspected contamination. In a separate study the program will compile an inventory of sediment contamination problems throughout the United States. The information will be used in 1987 to target field sampling activities, as part of a comprehensive national assessment.

The program will continue to implement quality assurance (QA) efforts. This includes overseeing State QA implementation required in EPA grants, participating in interlaboratory tests and audits, and reviewing QA procedures. The program will also continue to operate and enhance the water quality information systems. The Regional offices will work with the States in preparing the 1986 Section 305(b) report.

### 1985 Accomplishments

In 1985, the Agency obligated \$12,832,300 supported by 187.1 total workyears for this program of which \$8,170,400 was from the Salaries and Expenses appropriation and \$4,661,900 was from the Abatement, Control and Compliance appropriation.

The program continued to promote the use of biomonitoring and to assist in development of TMDLs and WLAs. In conjunction with the National Pollutant Discharge Elimination System (NPDES) program, we issued a final technical support document for water quality-based control of toxic pollutants, using biomonitoring to assess the toxicity of effluents. The two programs jointly held seven technical workshops for Regions and States to explain and promote the use of these methods. The program developed a pilot test of these technical approaches for controlling actual instream consequences of the discharge of toxicity in effluents.

The program completed sampling for the National Dioxin Study. This effort included sampling a representative number of hydrologic units to assess dioxin build-up in bed sediments and native fish. It also included intensive surveys at a sample of manufacturing and pesticide use sites. A final report is being prepared for issuance in FY 1986.

The program issued the 1984 Section 305(b) Water Quality Inventory Report to Congress and issued guidance to the States for preparing the 1986 Section 305(b) report. This guidance incorporated the standardized approach for assessing and reporting water quality which EPA developed jointly with the States during 1983-1984.



# WATER QUALITY

## Municipal Source Control

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
-----								
(DOLLARS IN THOUSANDS)								
-----								
PROGRAM								
-----								
Municipal Waste Treatment Facility Construction								
Salaries & Expenses	\$21,834.9	\$21,895.0	\$21,800.2	-\$937.5	\$20,862.7	\$20,173.8	-\$688.9	
Abatement Control and Compliance	\$20,719.1	\$19,979.1	\$21,979.1	-\$945.1	\$21,034.0	\$18,779.1	-\$2,254.9	
Abatement Control and Compliance	\$13,000.0							
TOTAL	\$55,554.0	\$41,874.1	\$43,779.3	-\$1,882.6	\$41,896.7	\$38,952.9	-\$2,943.8	
Waste Treatment Operations & Maintenance								
Salaries & Expenses	\$1,413.6	\$1,577.9	\$1,549.6	-\$66.6	\$1,483.0	\$1,353.9	-\$129.1	
TOTAL	\$1,413.6	\$1,577.9	\$1,549.6	-\$66.6	\$1,483.0	\$1,353.9	-\$129.1	
TOTAL:								
Salaries & Expenses	\$23,248.5	\$23,472.9	\$23,349.8	-\$1,004.1	\$22,345.7	\$21,527.7	-\$818.0	
Abatement Control and Compliance	\$20,719.1	\$19,979.1	\$21,979.1	-\$945.1	\$21,034.0	\$18,779.1	-\$2,254.9	
Abatement Control and Compliance	\$13,000.0							
Municipal Source Control	TOTAL	\$56,967.6	\$43,452.0	\$45,328.9	-\$1,949.2	\$43,379.7	\$40,306.8	-\$3,072.9

# WATER QUALITY

## Municipal Source Control

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
----- (DOLLARS IN THOUSANDS) -----							
PERMANENT WORKYEARS -----							
Municipal Waste Treatment Facility Construction	482.6	472.5	472.0		472.0	461.3	-10.7
Waste Treatment Operations & Maintenance	32.8	33.1	33.7		33.7	30.5	-3.2
TOTAL PERMANENT WORKYEARS	515.4	505.6	505.7		505.7	491.8	-13.9
TOTAL WORKYEARS -----							
Municipal Waste Treatment Facility Construction	539.6	523.5	523.2		523.2	480.4	-42.8
Waste Treatment Operations & Maintenance	32.8	34.3	34.5		34.5	30.5	-4.0
TOTAL WORKYEARS	572.4	557.8	557.7		557.7	510.9	-46.8

WATER QUALITY  
Municipal Source Control

Budget Request

The Agency requests a total of \$40,306,800 supported by 510.9 total work-years for 1987, a decrease of \$3,072,900 and 46.8 total workyears from 1986. Of the request, \$21,527,700 will be for the Salaries and Expenses appropriation and \$18,779,100 will be for the Abatement, Control and Compliance appropriation, a decrease of \$818,000 and \$2,254,900, respectively.

Program Description

This subactivity provides resources at Headquarters and in the Regions for management of the Construction Grants program. For budgetary purposes, resources devoted to managing the Construction Grants Program are divided into the following components:

Municipal Waste Treatment Facility Construction -- This program includes most of the management activities associated with the Construction Grants program in Headquarters and Regional Offices. Abatement, Control and Compliance resources primarily support an interagency agreement with the Corps of Engineers. Through this agreement, the Corps provides a wide range of construction management and training activities to assure the technical and fiscal integrity of wastewater treatment project construction.

Waste Treatment Operations and Maintenance -- This program supports development of State programs to ensure that Publicly Owned Wastewater Treatment Works (POTWs) meet effluent requirements. It also provides support in implementing the Agency's National Municipal Policy.

MUNICIPAL WASTE TREATMENT FACILITY CONSTRUCTION

1987 Program Request

The Agency requests a total of \$38,952,900 supported by 480.4 total work-years for this program, of which \$20,173,800 will be for the Salaries and Expenses appropriation and \$18,779,100 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of \$688,900 and \$2,254,900, respectively, and a decrease of 42.8 total workyears. The decrease in Salaries and Expenses reflects reduced EPA staffing needs as a result of reduced numbers of new awards and active projects and reduced emphasis on State technical assistance. The decrease in Abatement, Control and Compliance reflects lower funding requirements for the Corps of Engineers Interagency Agreement due to overall workload reductions.

Working with States, the Agency will manage a phaseout of Construction Grants by providing needed regulations, policies, and guidance to develop and implement State and local programs. EPA will act primarily as overall program manager with the States and the Corps will perform most project management activities. EPA will continue to exercise remaining nondelegated project management-related responsibilities in the States and territories. Grants and permits coordination will continue to be provided to implement the National Municipal Policy. The \$16,759,300 request for the Corps of Engineers IAG will purchase 365 workyears of effort to provide construction management assistance to EPA and the States. The Corps will emphasize training of States to accelerate delegation of construction management activities in addition to its traditional construction management activities at active construction projects.

The 1986 Needs Survey will be completed and issued. EPA will continue to work with States to target available funds to meet highest priority water quality needs. To assist implementation of appropriate wastewater treatment technologies, EPA will publish materials on latest technological findings, and guidance to States on sludge management programs and practices. The Municipal Lagoon Study required by the 1984 Amendments to the Resource Conservation and Recovery Act (RCRA) will be completed and its findings will be summarized in a Report to Congress.

The Agency will monitor and provide project-specific assistance to eliminate remaining project completion/closeout backlogs and resolve claims and grantee appeals issues. Work will continue with the Office of Inspector General on audits and bidrigging control.

#### 1986 Program

In 1986, the Agency is allocating a total of \$41,896,700 supported by 523.2 total workyears for this program, of which \$20,862,700 is from the Salaries and Expenses appropriation and \$21,034,000 is from the Abatement, Control and Compliance appropriation.

In 1986, EPA is focusing on revising program regulations, policies and guidance needed to implement any statutory changes. The Agency is continuing to monitor State program management and to perform non-delegated program management activities. The Corps of Engineers is continuing to assist EPA and the States to ensure project construction integrity. The Corps will expend \$18,400,000 and provide 418 workyears of construction management support.

The Agency is promulgating amendments to construction grants management regulations and issuing guidance on conducting value engineering reviews for projects under \$10,000,000. Special review of proposed advanced treatment projects with incremental costs over \$3,000,000 is continuing in Headquarters and is being delegated on a trial basis in three Regional Offices. Funds allocated for operator training are being targeted to States to continue providing on-site compliance assistance to small communities.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$55,554,000 supported by 539.6 total workyears for this program, of which \$21,834,900 was from the Salaries and Expenses appropriation and \$33,719,100 was from the Abatement, Control, and Compliance appropriation. A special appropriation of \$13,000,000 in Abatement, Control and Compliance was used to support the operation of a solid waste disposal facility in Akron, Ohio.

Regional staff worked closely with the States to ensure orderly implementation of the 1981 statutory changes coming into effect in 1985. In 1985, 845 projects initiated operation and 977 were closed out. The \$17,050,000 for the Corps Interagency Agreement purchased 431 workyears of support to EPA and States to ensure technical and fiscal integrity of construction projects. Unliquidated obligations were reduced from \$9,900,000,000 to \$9,100,000,000.

The 1984 Needs Survey was published in 1985 presenting for the first time water quality and use improvements for each of 314 sub-basins. The Agency developed proposed sludge management regulations and promulgated revised secondary treatment regulations, including implementing guidance for State and local officials. Headquarters evaluated Regional review procedures concerning proposed high cost Advanced Treatment projects and submitted a Report to Congress. The Agency also awarded grants for the remaining 16 Marine Combined Sewer projects meeting national criteria. In 1985, the POTW Funding Task Force submitted its findings on funding strategies to promote long-term State and local self-sufficiency in financing wastewater treatment and long-term municipal compliance.



Grants totaling \$2,300,000 for operator training were awarded to States to continue to provide onsite compliance assistance to operators of small facilities and to a national association to assist development of more effective, self-sufficient State operator training and Operation and Maintenance programs.

#### WASTE TREATMENT OPERATIONS AND MAINTENANCE

##### 1987 Program Request

The Agency requests a total of \$1,353,900 supported by 30.5 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents a decrease of \$129,100 and 4.0 total workyears. The decrease reflects the ongoing progress of this program in developing effective State operations and maintenance and operator training programs.

To help ensure that Federally funded facilities continue to meet design performance and compliance requirements, Regional and State staff will continue to provide onsite compliance assistance at minor POTWs to implement the Operations Management Evaluation (OME) Program. In support of National Municipal Policy compliance, Regional staff will also assist in review of proposed compliance plans from communities not meeting their permit discharge limits.

EPA will also continue to implement the national Operation and Maintenance (O&M) Excellence Awards program. Staff will continue to review grantee first year project performance certifications. Regional staff will also continue to work with States to promote self-sufficiency in operator training and maintain essential oversight of State program implementation.

##### 1986 Program

In 1986, the Agency is allocating a total of \$1,483,000 supported by 34.5 total workyears, all of which is from the Salaries and Expenses appropriation.

Building on State program accomplishments, EPA Regional Office staff are implementing a new Operations Management Evaluation (OME) program at small publicly owned treatment facilities that are not in compliance, providing onsite compliance assistance in each State and managing State operator training grants. EPA will also implement a National O&M Excellence Awards program. Regional awards will be presented to sixty municipalities and national awards will be presented to six outstanding municipalities based on their O&M and compliance programs. Regional staff are continuing to assist EPA and State compliance programs to implement the National Municipal Policy. EPA is continuing to encourage implementation of State operator training action plans and compliance program integration.

##### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,413,600 supported by 32.8 total workyears for this program, all of which was from the Salaries and Expenses appropriation.

The Agency issued guidance on implementation of the OME and O&M awards programs. The impact of the grantee first year performance certification requirements contained in the 1981 Amendments were felt significantly in 1985 as increasing numbers of performance certifications were received for review. EPA continued to assist States and grantees in developing improved operations and maintenance and operator training programs. Regional staff maintained oversight of operator training programs funded with prior year grants and awarded grants from the 1985 appropriation. Approximately 600 small facilities have been returned to compliance in the States and Puerto Rico. EPA submitted a Report to Congress on Training For Operators of Publicly Owned Wastewater Treatment Plants and, with States, is continuing to implement the multi-year plans in the report for ensuring self-sufficient, compliance-oriented State training programs.



# **Enforcement**



ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# WATER QUALITY

## Water Quality Enforcement

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
-----								
(DOLLARS IN THOUSANDS)								
PROGRAM								
-----								
Water Quality Enforcement								
Salaries & Expenses	\$14,690.2	\$15,549.7	\$16,629.2	-\$714.8	\$15,914.4	\$15,999.5	\$85.1	
Abatement Control and Compliance	\$1,280.6	\$2,001.9	\$6,057.0	-\$260.4	\$5,796.6	\$2,057.0	-\$3,739.6	
TOTAL	\$15,970.8	\$17,551.6	\$22,686.2	-\$975.2	\$21,711.0	\$18,056.5	-\$3,654.5	
TOTAL:								
Salaries & Expenses	\$14,690.2	\$15,549.7	\$16,629.2	-\$714.8	\$15,914.4	\$15,999.5	\$85.1	
Abatement Control and Compliance	\$1,280.6	\$2,001.9	\$6,057.0	-\$260.4	\$5,796.6	\$2,057.0	-\$3,739.6	
Water Quality Enforcement	TOTAL	\$15,970.8	\$17,551.6	\$22,686.2	-\$975.2	\$21,711.0	\$18,056.5	-\$3,654.5
PERMANENT WORKYEARS								
-----								
Water Quality Enforcement	351.3	359.9	383.4		383.4	383.4		
TOTAL PERMANENT WORKYEARS	351.3	359.9	383.4		383.4	383.4		
TOTAL WORKYEARS								
-----								
Water Quality Enforcement	385.2	392.4	416.3		416.3	408.3	-8.0	
TOTAL WORKYEARS	385.2	392.4	416.3		416.3	408.3	-8.0	

## WATER QUALITY

### Water Quality Enforcement

#### Budget Request

The Agency requests a total of \$18,056,500 supported by 408.3 total workyears for 1987, a decrease of \$3,654,500 and 8.0 total workyears from 1986. Of the request, \$15,999,500 will be for the Salaries and Expenses appropriation and \$2,057,000 will be for the Abatement, Control and Compliance appropriation, an increase of \$85,100 and a decrease of \$3,739,600, respectively. The increase in Salaries and Expenses reflects adjustments to the 1986 base as part of governmentwide deficit reductions. The decrease in Abatement, Control, and Compliance primarily reflects discontinuation of a special grant program for improved enforcement..

#### Program Description

Water Quality Enforcement -- The National Pollutant Discharge Elimination System (NPDES) Enforcement Program (including pretreatment) assures the compliance of municipal and industrial permittees with NPDES requirements through a program of monitoring and inspections, administrative enforcement, and technical support of judicial enforcement actions. Major activities include 1) inspection of permittees ("permittee" includes industrial users of publicly-owned treatment works), 2) review of permittee monitoring data, 3) maintenance of a national data system, 4) identification and evaluation for appropriate follow-up of permittees in noncompliance, and 5) initiation of informal and formal enforcement actions to ensure compliance. Where informal negotiations and administrative enforcement actions do not result in compliance, cases are referred for judicial action and appropriate technical support is provided.

In addition to the NPDES portion of the Water Quality Enforcement Program, administrative and technical support is provided for the issuance of administrative enforcement actions against violations of the Spill Prevention Control and Countermeasure Plan requirements. Referrals are made to the U.S. Coast Guard for civil penalty assessment for oil and hazardous substance spill violations (Section 311(b)(6)(A)) in waters where EPA has jurisdiction, and inspection support is provided for enforcement against illegal dredge and fill activities (Section 404).

#### WATER QUALITY ENFORCEMENT

##### 1987 Program Request

The Agency requests a total of \$18,056,500 supported by 408.3 total workyears for this program, of which \$15,999,500 will be for the Salaries and Expenses appropriation and \$2,057,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$85,100 and a decrease of \$3,739,600, respectively, and a decrease of 8.0 total workyears. The decrease in workyears reflects the shift from data entry to data updating and system maintenance for the Permit Compliance System (PCS). The increase in Salaries and Expenses reflects adjustments to the 1986 base as part of governmentwide deficit reductions. The decrease in Abatement, Control and Compliance reflects completion of special grants to States for improved enforcement.

In 1987, EPA will focus on control of toxic discharges to surface waters by giving priority to implementation of the National Municipal Policy (NMP), overview and implementation of the pretreatment program, and compliance assessment and enforcement of Best Available Technology (BAT) and water quality based permits.

By the end of 1986, all major municipalities in nondelegated States needing construction to meet the July 1, 1988 statutory compliance deadline should be on enforceable schedules. Therefore, under the National Municipal Policy in 1987, EPA

will focus on assuring that permittees placed on enforceable schedules comply with those schedules. EPA will address all of the major permittees that fail to comply with established schedules in nondelegated States through administrative orders and referrals to the Department of Justice. All major municipalities in nondelegated States that have completed construction and have operations and maintenance problems which result in noncompliance will also be addressed. A second objective related to implementation of the NMP is establishing schedules for the approximately 1,100 minor permittees in nondelegated States needing construction to meet the deadline. About 20% of this universe will be placed on enforceable schedules in 1987.

By the end of 1986, all publicly owned treatment works (POTWs) needing pretreatment programs should have approved programs in place. The Water Quality Enforcement Program will turn to: 1) oversight of delegated State programs; 2) assuring that local control authorities comply with the provisions of their approved programs; and 3) assuring the compliance of industrial users, especially where there is no local control authority or approved State. EPA will assess the compliance of local control authorities through the conduct of pretreatment inspections and the review of annual reports submitted by these authorities. Pretreatment inspections will be conducted and annual reports will be reviewed in most of the approved programs in nondelegated States. In nondelegated States, EPA will address most of the anticipated noncompliance by local control authorities which fail to implement the approved program. Parallel enforcement actions will be taken against industrial users (IUs) in some of these noncomplying local control authorities.

Where there is no local control authority or approved State, EPA is responsible for assuring that IUs comply with categorical standards. The Water Quality Enforcement Program will continue to identify these industrial users and to inspect where the most serious compliance problems are suspected. Formal enforcement actions will be brought against industrial users when noncompliance is identified.

In 1987, the upgrading and expansion of the Permit Compliance System (PCS) will continue. PCS will be used for such activities as evaluating the consistency of permit conditions and enforcement actions nationwide. Using PCS, EPA will initiate the automated generation of accountability system reports.

Regions will maintain an inspection program for municipal and industrial permittees to verify compliance with their NPDES permit requirements. A total of 2,243 inspections will be conducted. Regions will also continue to emphasize a "timely and appropriate" enforcement response in all cases of significant noncompliance by issuing 50 Notices of Violation and 877 Administrative Orders. Technical support will be provided for approximately 80 NPDES cases initiated in previous years. New enforcement efforts against industrial sources will focus on those industries required to install Best Available Technology. Non-NPDES administrative enforcement activities will include Section 404 inspections, support for oil and hazardous materials spill penalty assessment, and spill prevention control and countermeasure (SPCC) inspections and enforcement support.

#### 1986 Program

In 1986, the Agency is allocating a total of \$21,711,000 supported by 416.3 total workyears for this program, of which \$15,914,400 is from the Salaries and Expenses appropriation and \$5,796,600 is from the Abatement, Control and Compliance appropriation.

The Water Quality Enforcement Program is continuing to emphasize: maintenance of high levels of compliance by all permittees, with special attention on municipal permittees; an effective compliance monitoring and inspection program to verify levels of compliance; initiation and maintenance of a pretreatment compliance monitoring and enforcement program; and the expansion of the Permit Compliance System to provide for report preparation and tracking.



Implementation of the National Municipal Policy (NMP) remains the program's highest priority. This policy requires that all municipalities that are in non-compliance because of needed construction or because of poor operation and maintenance of sewage treatment plants be put on enforceable schedules that will assure compliance, where possible, by the July 1, 1988 statutory compliance deadline. In 1986, the Agency is establishing enforceable schedules for all municipalities in nondelegated States which need construction to comply through the issuance of an Administrative Order or the initiation of a referral for civil judicial action, and will enforce failure to comply with these schedules. All of the major municipalities in nondelegated States needing corrective action because of operation and maintenance problems which are identified in 1985 and 1986 are also being addressed. In those cases where NPDES States do not establish enforceable schedules for municipalities needing them, EPA is initiating action to establish or enforce these schedules.

The central focus of the pretreatment program has been the effort to establish approved programs at the 1,450 POTWs required to have them. In 1985, a National Enforcement Initiative for POTW pretreatment program submissions resulted in the filing of eight cases with the Department of Justice. The Agency is continuing to take judicial action against POTWs with unapproved programs and is also initiating judicial action against a number of industries which have failed to install necessary treatment to meet categorical standards. Implementation of a pretreatment compliance monitoring program, which includes the conduct of a small number of inspections and the review of annual reports, is in the initial stages.

In conjunction with Headquarters, the Regions have improved and expanded their compliance enforcement data management capabilities through the use of an expanded and enhanced Permit Compliance System (PCS). By the end of 1986 all EPA Regions will convert to the Data Base Management System (DBMS). Conversion to a DBMS system allows preparation of Quarterly Noncompliance Reports (QNCRs) through PCS, as well as reporting for accountability systems such as the Strategic Planning and Management System.

Regions are continuing to emphasize a "timely and appropriate" enforcement response in all cases of significant noncompliance. Industrial enforcement also continues to address largely routine violations, but special attention is focused on industrial facilities that are required to install Best Available Technology (BAT). More resource intensive inspections of these facilities are necessary, and some referral actions are anticipated. Non-NPDES administrative enforcement activities include Section 404 inspections, support for oil and hazardous materials spill penalty assessment, and spill prevention control and countermeasure (SPCC) inspections and enforcement support.

#### 1985 Accomplishments

In 1985 the Agency obligated a total of \$15,970,800, supported by 385.2 total workyears, of which \$14,690,200 was from the Salaries and Expenses appropriation and \$1,280,600 was from the Abatement, Control and Compliance appropriation.

During 1985, implementation of the National Municipal Policy was the program's highest priority. Approximately, 40% of major municipalities needing construction to comply with the 1988 compliance deadline were placed on enforceable construction schedules. Enforceable construction schedules were also established for 20% of the minor municipal facilities needing schedules. Pretreatment activity focused on enforcement of the requirement that designated municipalities develop approvable local pretreatment programs and that industrial users comply with categorical pretreatment standards. The Agency reviewed and referred formal enforcement actions against 24 municipalities who failed to develop approvable pretreatment programs and 26 industrial users who failed to comply with categorical standards.

Contract resources were used to support and maintain a national data system (Permit Compliance System) which tracks the performance of all major permittees, to provide technical support for judicial enforcement actions, and to conduct inspections of municipal and industrial permittees. Contract funds were also used to train Regional and State personnel in monitoring and inspection techniques.

In 1985, 8% of major municipal permittees on final effluent limits were in significant noncompliance. 5% of industrial and other nonmunicipal permittees were in significant noncompliance. Both of these rates decreased from 1984 and reflect the emphasis given to timely and appropriate enforcement action against facilities in significant noncompliance.

Regional Offices conducted 2,080 compliance inspections, issued 24 Notices of Violations and 1,028 Administrative Orders. In States without approved NPDES programs EPA reviewed major dischargers' self-monitoring reports. Technical support was provided for the development of 118 civil cases which were referred to Headquarters for review.

Enforcement of Section 311 oil and hazardous substance spill requirements included 144 referrals to the U.S Coast Guard for assessment of civil penalties and 161 administrative actions for violations of Spill Prevention and Control Countermeasure plan requirements. Enforcement of Section 404 provisions focused on identifying illegal discharges of dredge and fill material. Thirteen administrative actions were taken.

## WATER QUALITY

## Water Quality Permit Issuance

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
Permit Issuance							
Salaries & Expenses	\$12,105.4	\$12,865.5	\$12,138.3	-\$522.0	\$11,616.3	\$11,533.4	-\$82.9
Abatement Control and Compliance	\$3,790.3	\$6,069.2	\$4,329.1	-\$186.2	\$4,142.9	\$3,778.7	-\$364.2
TOTAL	\$15,895.7	\$18,934.7	\$16,467.4	-\$708.2	\$15,759.2	\$15,312.1	-\$447.1
TOTAL:							
Salaries & Expenses	\$12,105.4	\$12,865.5	\$12,138.3	-\$522.0	\$11,616.3	\$11,533.4	-\$82.9
Abatement Control and Compliance	\$3,790.3	\$6,069.2	\$4,329.1	-\$186.2	\$4,142.9	\$3,778.7	-\$364.2
Water Quality Permit Issuance	\$15,895.7	\$18,934.7	\$16,467.4	-\$708.2	\$15,759.2	\$15,312.1	-\$447.1
PERMANENT WORKYEARS							
-----							
Permit Issuance	287.0	299.9	279.7		279.7	279.7	
TOTAL PERMANENT WORKYEARS	287.0	299.9	279.7		279.7	279.7	
TOTAL WORKYEARS							
-----							
Permit Issuance	315.0	334.0	307.7		307.7	295.7	-12.0
TOTAL WORKYEARS	315.0	334.0	307.7		307.7	295.7	-12.0

## WATER QUALITY

### Water Quality Permit Issuance

#### Budget Request

The Agency requests a total of \$15,312,100 supported by 295.7 total workyears for 1987, a decrease of \$447,100 and a decrease of 12.0 total workyears. Of the total request, \$11,533,400 will be for the Salaries and Expenses appropriation and \$3,778,700 will be for the Abatement, Control and Compliance appropriation, a decrease of \$82,900 and \$364,200, respectively.

#### Program Description

Permit Issuance -- The Clean Water Act authorizes a National Pollutant Discharge Elimination System (NPDES) permit program to reduce or eliminate point source pollution. The discharge of pollutants into waters of the United States by point sources is prohibited unless in compliance with an NPDES permit. At present, 36 States and one Territory have approved NPDES programs. EPA issues NPDES permits in the remaining jurisdictions.

Currently, the NPDES program is focusing on control of toxic pollutants through technology-based and water quality-based limits in NPDES permits, implementation of the pretreatment program for indirect discharges to publicly owned treatment works (POTWs) and approval and oversight of local and State pretreatment programs (22 States are approved to implement pretreatment programs).

The NPDES program also allows permittees and interested parties to request evidentiary hearings on permits and variances from certain effluent limitations.

#### PERMIT ISSUANCE

##### 1987 Program Request

The Agency requests a total of \$15,312,100 supported by 295.7 total workyears for this program, of which \$11,533,400 will be for the Salaries and Expenses appropriation and \$3,778,700 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of \$82,900 and \$364,200, respectively, and a decrease of 12.0 total workyears. This decrease is due primarily to the substantial completion of the POTW pretreatment program approval effort.

During 1987, efforts will continue on issuing permits expiring in 1987 and modifying permits, with priority given to toxic pollutant controls based on water quality considerations. Municipal permits will be modified to incorporate final section 301(h) waiver decisions, pretreatment program implementation requirements, and toxic limits. During 1987, EPA will issue 244 major industrial permits and 172 major municipal permits. Continued emphasis will be placed on issuing permits to environmentally significant minor and unpermitted dischargers, especially those with toxic discharges or otherwise adversely affecting water quality. Continued emphasis will be given to issuing new source permits and general permits, particularly outer continental shelf general permits.

In 1987, EPA will continue to review and evaluate requests for fundamentally different factor, water quality, economic and thermal discharge variances, and request for extensions of Best Available Technology (BAT) compliance deadlines where innovative pollution control technologies are to be demonstrated.

Efforts will continue on assisting in the development of new State NPDES programs and necessary modifications to approved NPDES States. EPA will assist NPDES

States in issuing major permits and increased emphasis will be placed on assisting NPDES States in eliminating their minor permit backlog, primarily through technical assistance and training.

During 1987, the quality assurance program for NPDES permits will continue to be a priority. Activities include review of selected permits, mid-year Regional and State program evaluations, review of Memoranda of Understanding between EPA and NPDES States, review and assistance in correcting legally deficient State programs, and evaluations of approved POTW and State pretreatment programs.

During 1987, emphasis will be placed on correcting and adjusting approved local and State pretreatment programs to address inconsistencies with national pretreatment requirements and to include new requirements (e.g., local limits to prevent passthrough and interference). EPA will provide assistance to State and local authorities in applying complex national regulations such as the combined waste stream formula and certain mass-based categorical standards. EPA will review POTW applications for removal credits and make industrial user category determinations. EPA will overview approved POTW programs by use of on-site audits to ensure the adequacy of local limits and proper incorporation of categorical standards. In addition, EPA will carry out its responsibilities for direct implementation in the absence of State or local control authorities. The pretreatment regulation revisions will continue.

#### 1986 Program

In 1986, the Agency is allocating a total of \$15,759,200 supported by 307.7 total workyears for this program, of which \$11,616,300 is from the Salaries and Expenses appropriation and \$4,142,900 is from the Abatement, Control and Compliance appropriation.

In 1986, priority is being given to issuing major industrial and municipal permits, particularly in water use-impaired areas and where BAT guidelines have been promulgated, in order to continue reductions in the discharge of pollutants, particularly toxics. Permits with reopener clauses are being modified to incorporate revisions to discharge limitations or other permit conditions. Increased emphasis is being given to issuing minor permits that impact water quality uses, particularly those with toxic discharges. During 1986, EPA is expected to issue 193 major industrial permits, 204 major municipal permits and 626 minor permits.

In 1986, EPA is continuing to address evidentiary hearing requests and is acting on approximately 55 variance requests.

During 1986, two States are expected to receive full NPDES authority and seven States are expected to receive approval for pretreatment and/or federal facility authority. EPA is continuing to assist NPDES States in reducing their permit backlogs and reviewing the quality of selected NPDES State permits and State regulations to assure consistency with Federal requirements.

EPA is reviewing and approving the remaining local pretreatment programs required by federal regulation. EPA is reviewing removal credit applications from POTWs, baseline monitoring reports from indirect industries and annual reports on pretreatment program status from POTWs. The overview of approved programs by use of on-site audits is continuing. EPA is expecting to conduct 136 audits. A pretreatment regulatory package is being promulgated reflecting final definitions and proposed changes implementing Pretreatment Implementation Review Task Force (PIRT) recommendations.

#### 1985 Accomplishments

In 1985, the Agency obligated \$15,895,700 supported by 315.0 total workyears, of which \$12,105,400 was from the Salaries and Expenses appropriation and \$3,790,300 was from the Abatement, Control and Compliance appropriation. The contract re-

sources in 1985 were directed at assistance to POTWs and States in implementing the approved programs and assistance for NPDES State permit issuance and evidentiary hearing support.

EPA issued a total of 488 major and 1061 minor permits. Of these 1,549 permits, 860 were industrial (210 majors) and 689 were municipal (278 majors).

In 1985, one previously approved NPDES State received pretreatment authorization.

During 1985, EPA continued to assist POTWs in the development of local pretreatment programs. EPA approved 202 POTW pretreatment programs (pretreatment States approved 331). EPA performed one State pretreatment program audit and 59 local pretreatment program audits. The pretreatment regulation package for reinstatement of FDF's for indirect dischargers was promulgated in 1985.

# **Drinking Water**





ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# DRINKING WATER

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
-----							
APPROPRIATION							
Salaries & Expenses	\$26,649.6	\$29,246.3	\$28,924.5	-\$1,243.8	\$27,680.7	\$28,378.5	\$697.8
Abatement Control and Compliance	\$44,431.3	\$44,653.2	\$47,263.2	-\$2,032.4	\$45,230.8	\$42,863.0	-\$2,367.8
Research & Development	\$14,164.0	\$14,226.3	\$15,042.7	-\$647.0	\$14,395.7	\$12,885.0	-\$1,510.7
TOTAL, Drinking Water	\$85,244.9	\$88,125.8	\$91,230.4	-\$3,923.2	\$87,307.2	\$84,126.5	-\$3,180.7
PERMANENT WORKYEARS	543.4	584.5	595.8		595.8	587.8	-8.0
TOTAL WORKYEARS	604.3	642.3	639.8		639.8	639.8	
OUTLAYS	\$86,081.7	\$98,286.3	\$87,423.1	-\$2,356.7	\$85,066.4	\$83,434.7	-\$1,631.7
AUTHORIZATION LEVELS	Authorization for the Safe Drinking Water Act expired September 30, 1982. Reauthorization is pending.						

## DRINKING WATER

### OVERVIEW & STRATEGY

The Safe Drinking Water Act (SDWA) requires EPA to ensure that the Nation's drinking water supplies are free of contamination which may pose a public health risk. The Act also mandates a national Underground Injection Control (UIC) program to protect underground sources of drinking water. In addition, the 1984 Ground-Water Protection Strategy provides EPA with a framework for the protection and clean-up of the Nation's ground water resources.

EPA is required to set national drinking water standards for public water systems and minimum requirements for the Public Water Systems Supervision (PWS) and UIC programs. The States retain the lead role of administering and enforcing regulatory provisions established by EPA for the PWS and UIC programs. EPA will directly implement a program and enforce regulations only when a State fails to assume primary enforcement responsibility or enforce regulations effectively. In assuming primacy, the State may establish more stringent and comprehensive standards and requirements. The SDWA also provides Federal financial and technical assistance to States to help them carry out their responsibilities.

The Agency's strategy to promote State primacy as the first step in implementing the PWS program has succeeded with virtually nationwide delegation. In 1987, 54 States will have assumed primary enforcement authority for the PWS supervision program, which will lead to marked progress in PWS compliance. EPA is trying to build a similar record of successful delegation for the emerging UIC program: at the beginning of 1987 we expect 41 States will have primacy over all or part of the UIC requirements. The Agency has recently completed nationwide implementation of UIC programs through a combination of primacy delegations and direct implementation regulations.

The 1987 Drinking Water request focuses on several major objectives to meet the requirements of the SDWA: (1) revise current health protection standards; (2) implement and enforce UIC; (3) improve PWS compliance; (4) address emerging contamination problems; (4) pursue ground water protection; and (6) continue research and development.

#### Revise Current Health Protection Standards

Since 1977, EPA and the States have been supervising the safety of public water supplies through Interim National Primary Drinking Water Regulations (NPDWR) for drinking water contaminants which have traditionally been of concern. The SDWA mandates Revised NPDWRs to stand as comprehensive protection against drinking water health risks posed by natural or synthetic contaminants. Revisions will incorporate accumulated scientific health research and innovations in treatment technology. The Revisions will also present an opportunity to reduce unnecessary administrative burdens based on the experience EPA and the States have acquired with interim regulations.

Revised NPDWRs may take the form of numeric Maximum Contaminant Levels (MCLs) or treatment requirements. In either case, a separate "Recommended MCL" (RMCL) is first established for every contaminant to be regulated. RMCLs are health goals which are set at a level where "no known or anticipated adverse effects on the health of persons occur and which allows an adequate margin of safety."

Since the SDWA requires primary regulations for "contaminants which ... may have any adverse effect on the health of persons," a large number of contaminants must be evaluated and the task of evaluating risks and developing contaminant standards must be carried out in phases. Phase I addresses volatile organic chemicals (VOCs) frequently encountered within ground water source systems. Phase II pertains to 42 contaminants (pesticides, synthetic organic chemicals, inorganics, and microbiological contaminants). Phase III addresses radionuclides, including

both naturally occurring (radium, radon, uranium) and man-made contaminants. Phase IV encompasses disinfection and disinfection by-products along with the review of the trihalomethane MCL. As Phases I-IV are completed in 1987 and beyond, the 22 existing interim standards will be supplanted with approximately 60 standards, as well as treatment technology requirements aimed at control of waterborne disease outbreaks. Nonetheless, the Agency continues to look at several more contaminants while data is being collected on their occurrence, health effects, and treatment and/or measurement in drinking water.

Complementing enforceable regulations are health advisories, which serve as guidance relating to the toxicology of unregulated contaminants. In 1987, health advisories and a health advisory registry will be developed to disseminate information on toxic substances to an increasing number of clients beyond traditional drinking water agencies. Such preliminary benchmarks can be on hand far sooner than formal primary standards and can be made available to State and local authorities in the event contamination is detected. Other advisories will be developed to support the unregulated contaminant surveillance program and the National Pesticides Survey. The health advisories and MCLs will also be used to support Resource Conservation and Recovery Act (RCRA) waste banning decisions, Superfund clean-up activities, and control actions for agricultural chemicals.

#### Implement and Enforce Underground Injection Control

The major objective of the UIC program will be to ensure the establishment and implementation of approved UIC programs by States or by EPA where States have not assumed enforcement responsibilities. Permitting and compliance with permit and statutory requirements will continue to be a high program priority. State and EPA programs will see that the growing number of permitted wells operate in conformance with permit requirements. A field presence will be established to identify compliance problems requiring correction. This will include witnessing and reviewing the performance of mechanical integrity tests, review of well records for wells authorized by rule, on-site inspections, maintenance and update of current well inventories, tracking compliance with permit conditions and/or rule requirements and technical assistance to well operators. Where a State does not or cannot respond to significant violations in a timely and appropriate manner, EPA will initiate formal enforcement actions.

#### Improve PWS Compliance

At the same time as compliance with existing standards receives greater emphasis, both the States and EPA must also prepare to implement and enforce a wide range of new contaminant standards resulting from NPDWR revision. Primacy States must be prepared to implement the Phase I MCLs for Volatile Organic Chemicals (VOCs), which are scheduled to be effective in 1988. The States will also ensure that public water systems initiate the first round of contaminant monitoring and reporting requirements, including monitoring for approximately 50 unregulated contaminants.

Despite continuing progress in compliance with existing standards, there are two percent of community water systems across the country that persistently fail to provide drinking water that meets minimum basic microbiological health standards. In 1987, EPA and the States will take action in reducing the number of persistent violators in both primacy and non-primacy States. Where primacy States do not take corrective action, Federal enforcement actions will be initiated.

#### Address Emerging Contamination Problems

In order to anticipate and manage potential problems before they pose substantial human health risks, we are continuing to collect occurrence data on contaminants not already regulated. Under the Phase I regulations, public water systems will be required to monitor for as many as 50 additional unregulated VOCs. This monitoring will give consumers information on unregulated contaminants in the water they drink, help the Agency evaluate health risks, and guide future regulatory requirements.

Pesticides contamination incidents are an important and emerging problem across the nation. There are hundreds of constituent pesticide chemicals in use that may have the potential for migrating into surface and ground water; the public health threat of these pesticide contaminants is uncertain. With more comprehensive and reliable occurrence data, EPA should be able to evaluate the need for new regulatory action based on solid evidence of the magnitude of exposure. Together, the Office of Drinking Water and Office of Pesticides Programs are conducting a nationwide survey of pesticide contamination of ground water supplies to characterize the occurrence of selected pesticides in drinking water derived from ground water, determine the relationship between ground-water contamination and the characteristics of pesticide usage and the hydrogeologic environment, and estimate human exposure to these chemicals. By 1987, sampling and analysis for as many as 50 active ingredients and numerous transformation products will be fully underway; ultimately, samples from 1500 locations will be analyzed.

#### Pursue Ground Water Protection

The Agency's principal objectives are articulated in the Ground-Water Protection Strategy issued in 1984. First, the most effective and broadly acceptable way to increase the national capability to protect ground water is to strengthen State programs. EPA will encourage States to make use of existing grant programs to develop ground-water protection strategies and programs, and work with States to develop institutional capabilities.

A second objective is to address the problems from local contamination sources that in aggregate are of particular national concern, for example, pesticides, septic tanks, highway de-icing, and roadcoatings. EPA is evaluating the threats from these sources and taking appropriate steps under existing legislative authorities. Third, a fundamental part of the Strategy is a policy to set priorities for ground-water protection according to use and relative vulnerability to contamination, based on three classes of ground water. The Agency will implement guidelines to define ground water for use in making protection and cleanup decisions in EPA programs. Fourth, EPA will use existing data systems to develop the ability to synthesize other systems and to shape and analyze ground water-related systems. Another major area of activity is the development of a public information program to inform the public on ground water issues and EPA protection initiatives.

#### Continue Research and Development

EPA's drinking water research program provides support to States and the drinking water regulatory program in implementing the SDWA in the areas of contaminant occurrence and health effects, analytical methodology, quality assurance technologies, control technology and related costs, and the protection of ground-water resources.

The research program will continue to support the Office of Drinking Water in its effort to develop maximum contaminant levels and health advisories for specific chemicals found in drinking water. This effort will be directed at developing toxicological data to support development of RMCLs and filling in toxicological data gaps for existing chemicals. Microbiological research will continue to evaluate methods for isolating, identifying and characterizing the health effects of pathogens. Epidemiological studies will be conducted relating to drinking water quality and cardiovascular disease and an epidemiological study will be conducted on the relationship between radon in drinking water and lung cancer.

This program will evaluate processes for removal of VOCs, pesticides and radionuclides for use in regulation development and implementation. Disinfectant effectiveness and factors contributing to microbial deterioration of water quality in distribution systems will be evaluated.

The research program will continue to focus on methods development for ground-water investigations and studies of subsurface transport and fate processes such as sorption, biological transformation, redox, hydrolysis, and ion exchange. Research will include looking at identification and assessment technologies for improving

injection well practices, assessing fluid movement from injection wells and developing laser-induced fluorescence for monitoring ground water by fiber optics. This work is coordinated with research in Hazardous Waste which provides models and field evaluation. Research to determine the feasibility and effectiveness of in situ aquifer restoration techniques will continue.

Field evaluations of movement and transformation of wastes from underground injection wells will continue. Continued support for UIC research will provide more confidence in our ability to evaluate the risk posed by this method of waste disposal. A pilot program will be initiated to charge to public and private users for certain quality assurance services provided by EPA.

# DRINKING WATER

PROGRAM ACTIVITIES	Actual 1985	Budget Estimate 1986	Current Estimate 1986	Estimate 1987	Increase (+) Decrease (-) 1987 vs. 1986
<u>Incremental Outputs</u>					
UIC Permit Determinations:					
- for existing and new facilities, by primacy States.....	180 <sup>1/</sup>	150 <sup>1/</sup>	6,541 <sup>2/</sup>	6,501 <sup>2/</sup>	-40
- for existing and new facilities, by EPA.....	424	650	660	624	-36
Enforcement Actions - PWS:					
Inspections.....	N/A				
Notices of Violations.....	N/A				
Administrative Orders.....	3	15 <sup>3/</sup>			
Civil Litigation (new).....	6		10	10	0
Criminal Litigation.....	0	0	0	0	0
Enforcement Actions - UIC:					
Inspections.....	48,300		34,178	31,463	-2,715
Notices of Violations.....	N/A				
Administrative Orders.....	N/A				
Civil Litigation (new).....	2	0	5	5	0
Criminal Litigation.....	0	0	0	0	0
<u>Cumulative Outputs:</u>					
PWS Primacy States.....	53	53	54	54	0
UIC Primacy States (full and partial programs).....	38	42	38	41	+3
Designated Sole Source Aquifers.....	21	27	24	27	+3
Percent of Community Water System (CWS) in Compliance with Microbiological MCL..	90.4%	93.5%	91.4%	92.8%	+1.4%
Percent of CWSs in Compliance with Microbiological Monitoring/Reporting (M/R) Requirements.....	77.1%	86.5%	79.4%	81.8%	+2.4%
Percent of CWSs in Compliance with Turbidity MCL...	96.9%	97%	97.3%	97.6%	+0.3%
Percent of CWSs in Compliance with Turbidity M/R Requirements.....	91.5%	93%	92.3%	92.8%	+0.5%

1/ Includes existing Class I and III wells.

2/ Includes existing and new Class I, III, V, and new Class II wells.

3/ 1986 budget estimate of 41 includes 15 new and 26 ongoing civil litigations.





# **Research and Development**



ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# DRINKING WATER

## Drinking Water Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
----- (DOLLARS IN THOUSANDS) -----							
PROGRAM							
-----							
Scientific Assessment -							
Drinking Water							
Salaries & Expenses	\$350.7	\$423.6	\$423.6	-\$18.1	\$405.5	\$349.2	-\$56.3
Research & Development	\$74.6	\$75.0	\$68.8	-\$3.0	\$65.8	\$248.0	\$182.2
TOTAL	\$425.3	\$498.6	\$492.4	-\$21.1	\$471.3	\$597.2	\$125.9
Monitoring Systems &							
Quality Assurance -							
Drinking Water							
Salaries & Expenses	\$1,538.1	\$1,610.3	\$1,596.8	-\$68.6	\$1,528.2	\$1,596.8	\$68.6
Research & Development	\$1,165.4	\$1,487.9	\$1,357.5	-\$58.4	\$1,299.1	\$1,217.0	-\$82.1
TOTAL	\$2,703.5	\$3,098.2	\$2,954.3	-\$127.0	\$2,827.3	\$2,813.8	-\$13.5
Health Effects -							
Drinking Water							
Salaries & Expenses	\$3,121.3	\$3,410.6	\$3,407.5	-\$146.4	\$3,261.1	\$3,372.7	\$111.6
Research & Development	\$5,894.0	\$6,525.9	\$6,306.5	-\$271.2	\$6,035.3	\$6,395.0	\$359.7
TOTAL	\$9,015.3	\$9,936.5	\$9,714.0	-\$417.6	\$9,296.4	\$9,767.7	\$471.3
Environmental							
Engineering &							
Technology - Drinking							
Water							
Salaries & Expenses	\$2,756.7	\$3,021.4	\$3,239.1	-\$139.4	\$3,099.7	\$2,973.8	-\$125.9
Research & Development	\$3,101.7	\$2,169.3	\$2,962.7	-\$127.4	\$2,835.3	\$1,343.0	-\$1,492.3
TOTAL	\$5,858.4	\$5,190.7	\$6,201.8	-\$266.8	\$5,935.0	\$4,316.8	-\$1,618.2

# DRINKING WATER

## Drinking Water Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
-----								
(DOLLARS IN THOUSANDS)								
Environmental Processes & Effects - Drinking Water								
Salaries & Expenses	\$1,395.3	\$1,515.3	\$1,527.6	-\$65.7	\$1,461.9	\$1,320.6	-\$141.3	
Research & Development	\$3,928.3	\$3,968.2	\$4,347.2	-\$187.0	\$4,160.2	\$3,682.0	-\$478.2	
TOTAL	\$5,323.6	\$5,483.5	\$5,874.8	-\$252.7	\$5,622.1	\$5,002.6	-\$619.5	
TOTAL:								
Salaries & Expenses	\$9,162.1	\$9,981.2	\$10,194.6	-\$438.2	\$9,756.4	\$9,613.1	-\$143.3	
Research & Development	\$14,164.0	\$14,226.3	\$15,042.7	-\$647.0	\$14,395.7	\$12,885.0	-\$1,510.7	
Drinking Water Research	TOTAL	\$23,326.1	\$24,207.5	\$25,237.3	-\$1,085.2	\$24,152.1	\$22,498.1	-\$1,654.0

## PERMANENT WORKYEARS

Scientific Assessment - Drinking Water	7.2	8.0	7.0		7.0	7.0	
Monitoring Systems & Quality Assurance - Drinking Water	27.5	27.1	27.1		27.1	27.1	
Health Effects - Drinking Water	50.5	62.5	68.5		68.5	60.5	-8.0
Environmental Engineering & Technology - Drinking Water	51.3	48.1	55.3		55.3	55.3	

# DRINKING WATER

## Drinking Water Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
	(DOLLARS IN THOUSANDS)						
Environmental Processes & Effects - Drinking Water	26.0	22.3	22.3		22.3	22.3	
TOTAL PERMANENT WORKYEARS	162.5	168.0	180.2		180.2	172.2	-8.0
TOTAL WORKYEARS -----							
Scientific Assessment - Drinking Water	9.1	9.0	9.0		9.0	9.0	
Monitoring Systems & Quality Assurance - Drinking Water	28.5	30.1	29.8		29.8	29.8	
Health Effects - Drinking Water	58.6	69.5	68.5		68.5	68.5	
Environmental Engineering & Technology - Drinking Water	57.0	59.3	58.4		58.4	58.4	
Environmental Processes & Effects - Drinking Water	28.7	24.5	24.3		24.3	24.3	
TOTAL WORKYEARS	181.9	192.4	190.0		190.0	190.0	

TT-DW

## DRINKING WATER

### Drinking Water Research

#### Principal Outputs by Objective

##### 1987 PLANNED OUTPUTS

=====

##### Objective 1: Develop Drinking Water Standards Based on Health Effects Through Risk Assessment Studies

- o Develop health advisories and criteria documents (Sci. Assessment)
- o Report on the carcinogenic and target organ toxicity of major chemical contaminants in drinking water (Health)
- o Report on the cardiovascular disease risk factors in populations supplied with chlorinated and non-chlorinated drinking water of varying hardness (Health)
- o Determination of virulence and growth conditions of Legionella (Health)

##### Objective 2: Provide Engineering Technologies and Monitoring Data for Drinking Water Standards

- o Testing and validation of radionuclide procedures for thorium, polonium 210, lead 210 and plutonium (Monitoring)
- o Report on radiation methods validation and on the intercomparison program for radiation quality assurance (Monitoring)
- o Report on laboratory certification for 10 regions (Monitoring)
- o Report on control of lead solder corrosion (Engineering)
- o Report on the costs of selected water supply systems - compliance vs. non-compliance (Engineering)
- o State-of-the-art report on removal of organic materials from drinking water (Engineering)

##### Objective 3: Provide Scientific Methods and Data for Protection of Ground-water Resources

- o Airborne and ground-based environmental monitoring to detect brine contamination from injection wells. (Monitoring)
- o Report on sources of variability affecting ground-water monitoring data (Monitoring)
- o Training course presentation materials on conducting ground-water investigations (Env. Processes)
- o Report on cement bonding of injection wells (Env. Processes)
- o State-of-the-art report on interaction of injected fluids with geologic materials (Env. Processes)

##### 1986 PLANNED OUTPUTS

=====

##### Objective 1: Develop Drinking Water Standards Based on Health Effects Through Risk Assessment Studies

- o Criteria documents for drinking water disinfectants and disinfection by-products (Sci. Assessment)
- o Drinking water criteria documents and health advisories (Sci. Assessment)
- o Report on the occurrence and significance of viruses in drinking water (Health)
- o Report on the clinical study of the health effects of ingesting chlorinated drinking water (Health)

- o Report on the toxicological effects of three (xylene, dichloropropane, chloroacetic acid) drinking water contaminants (Health)

Objective 2: Provide Engineering Technologies and Monitoring Data for Drinking Water Standards

- o Report on national inorganic radionuclide survey providing radiochemical and inorganic analytical data for drinking water (Monitoring)
- o Report on the presence-absence test in small water systems (Monitoring)
- o Report on pathogen inactivation (Engineering)
- o Report on removal of pesticides from drinking water (Engineering)
- o Report on methods for removal of radium from drinking water (Engineering)

Objective 3: Provide Scientific Methods and Data for Protection of Ground-water Resources

- o Evaluation and development of laser-induced fluorescence for monitoring ground-water using fiber optics (Monitoring)
- o Provision of data and methods to support ground-water regulations, enforcement, management programs (Monitoring)
- o Publish a training manual for Ground-water Contaminant Modeling (Env. Processes)
- o Report on Case Study of Class I (industrial) Injection Wells (Env. Processes)

1985 ACTUAL OUTPUTS

=====

Objective 1: Develop Drinking Water Standards Based on Health Effects through Risk Assessment Studies

- o Publish 28 final drinking water criteria documents (Sci. Assessment)
- o Development of improved immunological methods for detecting *Giardia* (Health)
- o Report on the target organ effects from subchronic exposure to carbon tetrachloride (Health)

Objective 2: Provide Engineering Technologies and Monitoring Data for Drinking Water Standards

- o Report on evaluation of monitoring methods for radionuclides in drinking water (Monitoring)
- o Annual reports on laboratory certification regional program, traceability of National Bureau of Standards and reference analytical services (Monitoring)
- o Report on microbial quality considerations in distribution systems (Engineering)
- o Report on methods of biological sample preservation (Monitoring)
- o Report on bacterial transport by carbon particles passing through water treatment plants (Engineering)

Objective 3: Provide Scientific Methods and Data for Protection of Ground-water Resources

- o Report on fiber optics for monitoring ground-water contaminants (Monitoring)
- o Publish state-of-the-art report on aquifer restoration techniques (Env. Processes)
- o An introduction to ground-water tracers manual (Env. Processes)



## DRINKING WATER

### Drinking Water Research

#### Budget Request

The Agency requests a total of \$22,498,100 supported by 190.0 total workyears for 1987, a decrease of \$1,654,000 and no change in total workyears from 1986. Of the request, \$9,613,100 will be for the Salaries and Expenses appropriation and \$12,885,000 will be for the Research and Development appropriation, a decrease of \$143,300 and \$1,510,700, respectively.

#### Program Description

The Drinking Water research program provides support to States and the EPA Office of Drinking Water (ODW) in implementing the Safe Drinking Water Act (SDWA) in the areas of contaminant occurrence and health effects, analytical methodology, control technology and related costs, and the protection of ground-water resources.

Objective 1: Develop Drinking Water Standards Based on Health Effects Through Risk Assessment Studies. Research in this activity provides health assessment information to support the Office of Drinking Water in developing revised regulations to control drinking water contaminants under Section 1412 of the SDWA. The health research program also assists States in ascertaining causes of waterborne infectious disease outbreaks and determining the hazard to humans from exposure to infectious agents through drinking water.

Objective 2: Provide Engineering Technologies and Monitoring Data for Drinking Water Standards. Research supporting this objective provides analytical procedures to monitor drinking water contaminants. In addition, engineering research will evaluate treatment processes and costs to support ODW regulatory decision-making.

Objective 3: Provide Scientific Methods and Data for Protection of Ground-water Resources. Work in this category will provide the scientific basis for the protection of underground drinking water sources to implement Section 1421 and 1414 of the SDWA. These efforts are coordinated with the pesticides and hazardous waste programs.

#### SCIENTIFIC ASSESSMENT

##### 1987 Program Request

The Agency requests a total of \$597,200 supported by 9.0 total workyears for this program, of which \$349,200 will be for the Salaries and Expenses appropriation and \$248,000 will be for the Research and Development appropriation. This represents a decrease of \$56,300 and an increase of \$182,200, respectively, and no change in total workyears. The net increase will be used to develop methods for evaluating health hazards associated with potable reuse of wastewater, and additional health advisories for specified chemicals.

Develop Drinking Water Standards Based on Health Effects Through Risk Assessment Studies. Research will provide water criteria and assessment documents for drinking water contaminants of disinfectants and their by-products. The program will continue to provide technical support and assistance in response to Regional and State requests. Research will also continue to maintain state-of-the-art methodology for assessment of potential risk to human health from exposure to constituents found in drinking water.

### 1986 Program

In 1986, the Agency is allocating a total of \$471,300 supported by 9.0 total workyears for this program, of which \$405,500 is from the Salaries and Expenses appropriation and \$65,800 is from the Research and Development appropriation.

In 1986, this program is finalizing drinking water criteria documents for drinking water contaminants, disinfectants and Phase V chemicals and initiating documentation in support of health advisories.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$425,300 supported by 9.1 total workyears for this program, of which \$350,700 was from the Salaries and Expenses appropriation and \$74,600 was from the Research and Development appropriation.

Major accomplishments included the initiation of criteria documents for drinking water Phase IV chemicals and documentation for eight Phase V chemicals, including health advisory levels.

## MONITORING SYSTEMS AND QUALITY ASSURANCE

### 1987 Program Request

The Agency requests a total of \$2,813,800 supported by 29.8 total workyears for this program, of which \$1,596,800 will be for the Salaries and Expenses appropriation and \$1,217,000 will be for the Research and Development appropriation. This represents an increase of \$68,600 and a decrease of \$82,100, respectively, and no change in total workyears. The increase in Salaries and Expenses reflects adjustments to the 1986 base as part of government-wide deficit reductions. The decrease in Research and Development reflects a pilot effort to externalize quality assurance (QA) costs. This effort will involve charging of fees to public and private users for QA services (e.g., quality control check samples).

Provide Engineering Technologies and Monitoring Data for Drinking Water Standards. The program will distribute quality control samples and conduct Performance Evaluation studies. Method validation studies will be conducted for organic contaminants newly regulated under the Safe Drinking Water Act. The program will evaluate 10 regions and personnel for capabilities to provide quality data in support of the National Interim Primary Drinking Water Regulations monitoring program.

Provide Scientific Methods and Data for Protection of Ground-water Resources. Research will continue to provide both technical information and improved methods for predicting contaminant movement and transformation. Research will include looking at identification and assessment technologies for improving injection well practices, assessing fluid movement from injection wells and developing laser induced fluorescence for monitoring ground water by fiber optics.

### 1986 Program

In 1986, the Agency is allocating a total of \$2,827,300 supported by 29.8 total workyears for this program, of which \$1,528,200 is from the Salaries and Expenses appropriation and \$1,299,100 is from the Research and Development appropriation.

In 1986, the monitoring program is expediting methods validation work to meet the new drinking water regulations for organic chemical contaminants. The program provides analytical procedures to monitor drinking water contaminants including development of procedures for analysis of radioactive contaminants and improved coliform analysis methods.

## 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,703,500 supported by 28.5 total workyears for this program, of which \$1,538,100 was from the Salaries and Expenses appropriation and \$1,165,400 was from the Research and Development appropriation.

Reports were published on the evaluation of monitoring methods for radio-nuclides in drinking water and on the validation of radiation methods. The program maintained and distributed 55,000 quality assurance and performance evaluation samples. The program also produced a report on the use of fiber optics for monitoring ground-water contaminants.

## HEALTH EFFECTS

### 1987 Program Request

The Agency requests a total of \$9,767,700 supported by 68.5 total workyears for this program, of which \$3,372,700 will be for the Salaries and Expenses appropriation and \$6,395,000 will be for the Research and Development appropriation. This represents an increase of \$111,600 and \$359,700, respectively, and no change in total workyears. The increase will support the development of methods to determine risk from exposure to mixtures of chemicals instead of single chemicals.

Develop Drinking Water Standards Based on Health Effects Through Risk Assessment Studies. The health research program will continue to support ODW in its effort to develop maximum contaminant levels and Health Advisories for specific chemicals found in drinking water. This effort will be directed at developing toxicological data to support development of Acceptable Daily Intake levels and filling in toxicological data gaps for existing chemicals found in drinking water and recently identified for regulation. Also, toxicological data will be developed on disinfectants and disinfectant by-products with emphasis on effects expressed in vivo from residual disinfectants in drinking water.

Microbiological research will continue to evaluate methods for isolating, identifying and characterizing the health effects of pathogens. A research effort will begin to determine the public health significance of the occurrence of microbiological agents in drinking water and relate the health effects to an appropriate indicator.

Epidemiological studies will be conducted relating drinking water quality to cardiovascular disease. An epidemiological study will be conducted on the relationship between radon in drinking water and lung cancer. Assistance will be provided to states during waterborne disease outbreaks which will help stop and prevent transmission of disease from contaminated water. An epidemiology study will be conducted to determine the relationship between Legionella occurrence in drinking water and disease in susceptible populations.

Research will be conducted on the interactive toxicity of chemicals that occur in drinking water. Research results from past studies on techniques for preparing representative samples of organic concentrates will be consolidated. These techniques will then be used to prepare samples for testing in health bioassays to determine the potential health effects from complex mixtures in drinking water.

### 1986 Program

In 1986, the Agency is allocating a total of \$9,296,400 supported by 68.5 total workyears for this program, of which \$3,261,100 is from the Salaries and Expenses appropriation and \$6,035,300 is from the Research and Development appropriation.

The health research program continues to provide a scientific base for the Agency and States to use in identifying and controlling harmful contaminants in drinking water. Research is focused on those areas identified by ODW which support their regulatory efforts. This includes research on disinfectants, organic contaminants, waterborne pathogens and disease, inorganic chemicals and water treatment chemicals.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$9,015,300 supported by 58.6 total workyears for this program, of which \$3,121,300 was from the Salaries and Expenses appropriation and \$5,894,000 was from the Research and Development appropriation.

In 1985 the program developed improved immunological methods for detecting Giardia. Two important studies were completed and reports issued: A Report on the Target Organ Effects from Subchronic Exposures to Carbon Tetrachloride and a Report on the Influence of Corn Oil on the Toxicity of Chloroform and other Chlorinated Hydrocarbons in Drinking Water.

#### ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

##### 1987 Program Request

The Agency requests a total of \$4,316,800 supported by 58.4 total workyears for this program, of which \$2,973,800 will be for the Salaries and Expenses appropriation and \$1,343,000 will be for the Research and Development appropriation. This represents a decrease of \$125,900 and \$1,492,300, respectively, and no change in total workyears. The reduction reflects the completion of several research projects related to the practical operation of water utilities and field scale evaluations for removal of organics.

Provide Engineering Technologies and Monitoring Data for Drinking Water Standards. This program will continue to provide evaluation of processes for removal of volatile organic compounds (VOCs), pesticides and radionuclides for use in regulation implementation. It will provide information on treatment systems performances and costs to permit cost-effectiveness analyses of proposed treatment systems. The program will provide evaluations of disinfectant effectiveness and factors contributing to microbial deterioration of water quality in distribution systems. Research emphasizing technologies especially adaptable to small systems will continue.

##### 1986 Program

In 1986, the Agency is allocating a total of \$5,935,000 supported by 58.4 total workyears for this program, of which \$3,099,700 is from the Salaries and Expenses appropriation and \$2,835,300 is from the Research and Development appropriation.

Research is continuing to evaluate treatment processes and costs to support ODW regulatory decision-making. Cost data is being compiled for unit processes to do cost-effectiveness analyses of proposed treatment systems. Factors which contribute to deterioration of water quality in distribution systems and methods for control are being investigated. Work on lead standard compliance problems due to lead/tin solders in plumbing systems is being completed. Research work emphasizing technology particularly adaptable to small systems is also being continued.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$5,858,400 supported by 57.0 total workyears for this program, of which 2,756,700 was from the Salaries and Expenses appropriation and \$3,101,700 was from the Research and Development appropriation.

Major accomplishments included publication of the following reports: Removal of Radionuclides from Drinking Water, Problem of Microbial Protection of Invertebrates, Microbial Quality Considerations in Distribution Systems, and Biological Sample Preservation.

### ENVIRONMENTAL PROCESSES AND EFFECTS

#### 1987 Program Request

The Agency requests a total of \$5,002,600 supported by 24.3 total workyears for this program, of which \$1,320,600 will be for the Salaries and Expenses appropriation and \$3,682,000 will be for the Research and Development appropriation. This represents a decrease of \$141,300 and \$478,200, respectively, and no change in total workyears. The decrease reflects the completion of several studies related to basic process research.

Provide Scientific Methods and Data for Protection of Ground-water Resources. This program will continue to focus on methods development and studies of subsurface transport and fate processes such as sorption, biological transformation, redox, hydrolysis and ion exchange. Research to determine the cost-effectiveness of in-situ aquifer restoration techniques will continue, leading to cleanup where previously the cost was prohibitive. This work is coordinated with the Hazardous Waste and Pesticides Programs.

Field evaluation of movement and transformation of wastes from underground injection wells will continue. Continued support for Underground Injection Control (UIC) research work will provide more confidence that this method for waste disposal is safe and cost-effective.

Joint studies will also continue with the People's Republic of China in the area of transport and fate and ecological effects of ground-water contaminants.

#### 1986 Program

In 1986, the Agency is allocating a total of \$5,622,100 supported by 24.3 total workyears for this program, of which \$1,461,900 is from the Salaries and Expenses appropriation and \$4,160,200 is from the Research and Development appropriation.

Research is focused on developing and improving methods for predicting the impacts of contamination on underground sources of drinking water as well as providing for information transfer for the National Groundwater Information Center and the International Groundwater Modeling Center. The program is determining the cost-effectiveness of in-situ aquifer restoration techniques and supports the Underground Injection Control (UIC) regulations by studying the fate and transport of wastes in and from the injection zone.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$5,323,600 supported by 28.7 total workyears for this program, of which \$1,395,300 was from the Salaries and Expenses appropriation and \$3,928,300 was from the Research and Development appropriation.

In 1985, major accomplishments included completion of a field facility for determining the adequacy and accuracy of cement bonding and mechanical integrity tests for injection wells. A report on state-of-the-art aquifer restoration techniques was published. A technique for causing subsurface biodegradation of trichloroethylene was discovered. Two manuals were published to aid implementation of ground-water monitoring programs: A Practical Guide for Ground-water Sampling and An Introduction to Ground-water Tracers.

# **Abatement and Control**





ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# DRINKING WATER

## Drinking Water Criteria, Standards & Guidelines

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
----- (DOLLARS IN THOUSANDS) -----								
PROGRAM -----								
Criteria, Standards & Guidelines								
Salaries & Expenses	\$5,711.3	\$5,593.3	\$5,539.2	-\$238.4	\$5,300.8	\$5,580.9	\$280.1	
Abatement Control and Compliance	\$4,405.6	\$5,103.0	\$5,103.0	-\$219.5	\$4,883.5	\$5,003.0	\$119.5	
TOTAL	\$10,116.9	\$10,696.3	\$10,642.2	-\$457.9	\$10,184.3	\$10,583.9	\$399.6	
TOTAL:								
Salaries & Expenses	\$5,711.3	\$5,593.3	\$5,539.2	-\$238.4	\$5,300.8	\$5,580.9	\$280.1	
Abatement Control and Compliance	\$4,405.6	\$5,103.0	\$5,103.0	-\$219.5	\$4,883.5	\$5,003.0	\$119.5	
Drinking Water Criteria, Standards & Guidelines	TOTAL	\$10,116.9	\$10,696.3	\$10,642.2	-\$457.9	\$10,184.3	\$10,583.9	\$399.6
PERMANENT WORKYEARS -----								
Criteria, Standards & Guidelines	90.0	93.6	93.6		93.6	93.6		
TOTAL PERMANENT WORKYEARS	90.0	93.6	93.6		93.6	93.6		

# DRINKING WATER

## Drinking Water Criteria, Standards & Guidelines

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
TOTAL WORKYEARS							
-----							
Criteria, Standards & Guidelines	101.7	101.8	101.8		101.8	101.8	
TOTAL WORKYEARS	101.7	101.8	101.8		101.8	101.8	

## DRINKING WATER

### Drinking Water Criteria, Standards and Guidelines

#### Budget Request

The Agency requests a total of \$10,583,900 supported by 101.8 total workyears for 1987, a increase of \$399,600 and no change in total workyears from 1986. Of the request, \$5,580,900 will be for the Salaries and Expenses appropriation and \$5,003,000 will be for the Abatement, Control and Compliance appropriation, an increase of \$280,100 and \$119,500, respectively.

#### Program Description

Criteria, Standards and Guidelines -- The program is dedicated to the identification of drinking water contaminants that may have any adverse effect on human health, the determination of the contaminant levels that serve to protect against such effects, the development of enforceable standards and regulations and the implementation and oversight of the Public Water Systems Supervision (PWS) and Underground Injection Control (UIC) programs.

The Safe Drinking Water Act (SDWA) mandates that EPA develop revised National Primary Drinking Water Regulations (NPDWRs) to stand as comprehensive protection against adverse health effects posed by natural and synthetic toxic contaminants. Revised NPDWRs may take the form of numerical Maximum Contaminant Levels (MCLs) or a treatment-based requirement. In either case, a separate "Recommended MCL" (RMCL) is first established for every contaminant to be regulated, representing a health-based goal. For those contaminants found to be measurable at the system level with workable, affordable analytic technology, the MCL is set as close to the RMCL as feasible, taking into account the performance and cost of the best "generally available" treatment technology. Otherwise, a treatment requirement, prescribing such "generally available" technology, can be promulgated. Complementing these enforceable, primary standards are health advisories, nonenforceable guidance pertaining to the toxicology of contaminants with limited, localized occurrence or not yet regulated.

The Headquarters program shares in the implementation of the PWS and UIC programs by providing implementation tools (such as guidance documents and technical materials) and technical assistance. This program also tracks national environmental progress, establishing performance measures and compiling data on national compliance with PWS and UIC regulatory requirements. For this purpose, Headquarters develops and maintains automated data systems; it also maintains central financial management and program planning responsibilities. EPA also has responsibility to provide scientific and technical information to States, localities, and utilities.

#### CRITERIA, STANDARDS AND GUIDELINES

##### 1987 Program Request

The Agency requests a total of \$10,583,900, supported by 101.8 total workyears for this program, of which \$5,580,900 will be for the Salaries and Expenses appropriation and \$5,003,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$280,100 and \$119,500, respectively, with no change in total workyears. The Salaries and Expenses increase reflects increased operating costs. The Abatement, Control and Compliance increase reflects additional resources for the National Pesticide survey and monitoring activities.

EPA will promulgate the first revised NPDWRs, n/w MCLs for nine volatile organic contaminants (VOCs), including tetrachloroethylene, in late calendar year

1986. Finalization of Phase II RMCLs and proposal of enforceable MCLs and treatment regulations, dealing with the bulk of known or anticipated contaminant risks (pesticides, synthetic organic chemicals, inorganic chemicals, and microbiological disease agents) will be accomplished in Spring 1987. In addition, Phase III (radionuclides) proposed MCLs (with simultaneous publication of final RMCLs) will also be published.

In 1987, emphasis will increase on the fourth phase of NPDWR revision, which encompasses review of the last Interim MCL, for trihalomethanes (THMs), as well as consideration of disinfectant toxicity and additional disinfectant by-products. RMCLs for THMs, other prevalent by-products and disinfectants will be proposed in 1987.

The four phases of NPDWR revision comprise a comprehensive expansion of public health protection from exposure to toxic substances. The lack of health effects data on many substances, however, will require the Agency to continue its risk assessment process and evaluate new research findings on still unregulated contaminants. Primary regulations will be augmented with additional health advisories, supplying health-based numerical standards for a multitude of toxic substances which may turn up as localized contaminants. Because both the number and the application of these advisories have increased, EPA is developing an electronic-based, multi-access health advisory registry and a formal review system to assure the quality and consistency of scientific content.

Sampling and analysis for the National Pesticide Survey will continue. This nationwide survey of water supply wells, jointly supported by the Drinking Water and Pesticides programs, will involve sampling and analysis from more than 1500 locations as well as scanning for approximately 50 pesticides and their transformation products. Survey results will help the pesticide program determine the relationship between pesticide usage, chemical characteristics, environmental factors and subsequent contamination events; the survey will give the drinking water program occurrence data necessary to estimate human exposure, which will help determine future regulatory development. A general benefit is the demonstration of analytic technologies for monitoring a multitude of synthetic organic compounds. As the survey proceeds in finding problem contaminants, this data can be used to help fashion specific monitoring regulations for "vulnerable" systems to assure the safety of their supplies.

The program will continue to provide national direction, guidance and oversight to UIC programs, to assure consistent regulatory decisions and actions, while implementing a framework and procedures to define and track national environmental results.

#### 1986 Program

In 1986, the Agency is allocating a total of \$10,184,300 supported by 101.8 total workyears for this program of which \$5,300,800 is from the Salaries and Expenses appropriation and \$4,883,500 is from the Abatement, Control and Compliance appropriation.

In November 1985, final RMCLs and simultaneous proposal of enforceable MCLs for 8 Phase I VOCs were published. For one contaminant, tetrachloroethylene, new data necessitated re-proposal of the RMCL; consequently RMCL publication/MCL proposal must occur separately. Phase II RMCLs have also been proposed in November covering 26 organic chemicals and pesticides, 12 inorganic contaminants and 4 categories of microbiological contaminants. A final RMCL and proposed MCL for fluoride has also been issued. In April EPA expects to propose Phase III RMCLs, pertaining to radionuclides.

Incorporated within the Phase I NPDWR proposal is a special monitoring regulation requiring systems to monitor for approximately 50 unregulated VOCs using instrumentation and routines similar to that required for Phase I compliance monitoring. These rules, proposed under the authority of SDWA section 1445(a), are intended to help systems and the public learn more about their own water quality.

Monitoring results will also give EPA a more thorough data base on exposure to these contaminants. Before these rules are promulgated, health advisories for each target contaminant is being developed from available toxicology data to help guide systems or identify prospective health risks posed in the event of a contaminant's detection.

The Agency is completing plans for the National Pesticide Survey. The actual sampling and analysis starts in 1986. At the same time, another survey, the National Inorganics and Radionuclide Survey (NIRS), will be in its final phases of sampling and data compilation.

Full scale implementation of State and Federal UIC programs brings with it the emergence of various technical and programmatic issues which requires the development of a growing number of guidances, technical bulletins and other implementation tools to ensure consistent administration of UIC regulations.

#### 1985 Accomplishments

In 1985, the Agency obligated \$10,116,900, supported by 101.7 total workyears, of which \$5,711,300 was from the Salaries and Expenses appropriation and \$4,405,600 was from the Abatement, Control and Compliance appropriation.

During the year final health criteria documents were prepared for over 70 contaminants under regulatory consideration for Phases I-III. A RMCL for fluoride was proposed in June. A major portion of the NIRS sampling and analysis process was completed in September 1985; 52 health advisories were prepared covering organic and inorganic compounds under Phase I-II consideration and other compounds frequently associated with spills and localized contamination.

With UIC programs effective in December 1984 in the remaining non-primacy jurisdictions, Headquarters focused on providing guidance and technical assistance including completion of a national UIC compliance strategy and development of measures of compliance and environmental payoff.

# DRINKING WATER

## Drinking Water State Program Resource Assistance

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
----- (DOLLARS IN THOUSANDS) -----								
PROGRAM -----								
Public Water Systems Supervision Program Grants								
Abatement Control and Compliance	\$28,424.3	\$29,450.0	\$29,450.0	-\$1,266.3	\$28,183.7	\$28,450.0	\$266.3	
TOTAL	\$28,424.3	\$29,450.0	\$29,450.0	-\$1,266.3	\$28,183.7	\$28,450.0	\$266.3	
Underground Injection Control Program Grants								
Abatement Control and Compliance	\$8,312.1	\$9,100.2	\$9,100.2	-\$391.3	\$8,708.9	\$8,500.0	-\$208.9	
TOTAL	\$8,312.1	\$9,100.2	\$9,100.2	-\$391.3	\$8,708.9	\$8,500.0	-\$208.9	
Special Studies & Demonstrations								
Abatement Control and Compliance	\$2,100.0		\$2,350.0	-\$101.1	\$2,248.9		-\$2,248.9	
TOTAL	\$2,100.0		\$2,350.0	-\$101.1	\$2,248.9		-\$2,248.9	
Training								
Abatement Control and Compliance	\$214.0		\$250.0	-\$10.8	\$239.2		-\$239.2	
TOTAL	\$214.0		\$250.0	-\$10.8	\$239.2		-\$239.2	
TOTAL:								
Abatement Control and Compliance	\$39,050.4	\$38,550.2	\$41,150.2	-\$1,769.5	\$39,380.7	\$36,950.0	-\$2,430.7	
Drinking Water State Program Resource Assistance	TOTAL	\$39,050.4	\$38,550.2	\$41,150.2	-\$1,769.5	\$39,380.7	\$36,950.0	-\$2,430.7

## DRINKING WATER

### Drinking Water State Program Resource Assistance

#### Budget Request

The Agency requests a total of \$36,950,000 for 1987, a decrease of \$2,430,700 from 1986. All of the request will be for the Abatement, Control and Compliance appropriation.

#### Program Description

The intent of the Safe Drinking Water Act is that States should assume the primary role for implementing and enforcing the drinking water and the underground injection control (UIC) regulations. Federal financial assistance, in the form of grants, is provided to States to develop and maintain these programs. To be eligible for grants, States must have primary enforcement responsibility.

Public Water Systems Supervision Program Grants -- The program provides grants to States which have been delegated primary enforcement authority for implementing a Federally-approved Public Water System Supervision (PWS) program. EPA may also use the funds allocated to non-primacy States and Indian lands to defray the cost of Federal implementation of the program, including travel.

Underground Injection Control Program Grants -- This program provides grants to support State activities in implementing the UIC program. As with the PWS program, EPA may use the funds allocated to a non-primacy State and Indian lands for program implementation and travel associated with implementation activities in non-primacy States.

Special Studies and Demonstrations -- This program includes resources for the National Rural Water Association for training and technical assistance to operators of small rural water systems.

Training -- This program includes funds for fellowships to State personnel in the PWS and UIC program areas for academic training and for academic grants.

#### PUBLIC WATER SYSTEMS SUPERVISION PROGRAM GRANTS

##### 1987 Program Request

The Agency requests a total of \$28,450,000 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$266,300 for State implementation of volatile organic contaminants regulations.

This grant will be included in a legislative proposal for block grants designed to give States more flexibility and autonomy in administering environmental programs. In 1987, we expect States to continue to emphasize the following activities. The PWS grants will support 54 State primacy programs. During 1987, the States will prepare for the implementation of the volatile organic contaminants (VOC) regulations which will become effective in the Spring of 1988. These regulations cover those volatile organic contaminants frequently encountered in public water systems using ground-water sources and contain analytic and treatment requirements with precision levels well beyond the existing norm for small, groundwater source systems at risk. We expect the States to ensure that public water systems carry out the VOC monitoring and reporting requirements including mandatory monitoring of about 50 unregulated contaminants, a requirement authorized under Section 1445(a) of the SDWA. The States will initiate the first round of contaminant monitoring and, using health advisories, will work with systems to avoid health risks posed by unregulated contaminants.



EPA will encourage the States to redirect their enforcement programs to include violations of the VOC regulations and to ensure that timely and appropriate enforcement actions are initiated against non-complying systems.

State drinking water programs will continue to assume a pivotal role when contamination of drinking water sources is discovered, even in cases where unregulated contaminants are involved. State officials must evaluate the public health risks for those contaminants which EPA has not established an enforceable standard, collecting and interpreting health effects and treatment information to formulate an action plan. The PWS grant funds will continue to support primacy programs as well as EPA direct implementation program activities including analytical services, sanitary surveys, training, data management, disease surveillance, on-site technical activities, and data management.

#### 1986 Program

In 1986, the Agency is allocating a total of \$28,183,700 for this program, all of which is from the Abatement, Control and Compliance appropriation.

Fifty-four States are expected to receive grants, and EPA is using the funds allocated to the remaining States for direct implementation activities. EPA is providing transition assistance to Oregon and Pennsylvania.

During 1986, States are focusing on improving the compliance of community water systems with the regulations and working with systems where compliance is declining or progress has not been made. The States are initiating enforcement actions in cases of persistent non-compliance, where there is no evidence that systems will take corrective action. States are expected to initiate 5,700 enforcement actions and conduct 9,000 inspections related to violations. With the growing number of groundwater contamination incidents, State officials increasingly are called upon to gauge the public health risk and arrange the appropriate response. The grants also support program and data management activities.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$28,424,300 for this program, all of which was from the Abatement, Control and Compliance appropriation.

Fifty-three States including Pennsylvania received grants while EPA used the funds allotted to the non-primacy States for implementation of the Federal program through contracts. The grant funds supported PWS Supervision program operations, including the certification/recertification of an estimated 3,700 laboratories, the conduct of 38,000 routine sanitary surveys and the review of 20,000 plans and specifications. The States continued to focus on improving compliance among public water systems and initiated 4,600 formal enforcement actions and conducted 8,400 violation related inspections.

#### UNDERGROUND INJECTION CONTROL PROGRAM GRANTS

##### 1987 Program Request

The Agency requests a total of \$8,500,000 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents a decrease of \$208,900. The decrease in Abatement, Control and Compliance reflects progress in UIC permitting.

This grant will be included in a legislative proposal for block grants designed to give States more flexibility and autonomy in administering environmental programs. In 1987, we expect States to continue to emphasize the following activities.

These funds will support State or EPA programs to protect underground drinking water sources from contamination through underground injection practices. Permitting, which enables States (or EPA) to apply the general UIC requirements to site-specific conditions, will continue to be a high program priority. The priority for permitting remains new wells associated with oil and gas production (Class II), new wells related to deep injection of hazardous and municipal wastes (Class I) (permitting of existing Class I wells will be completed in 1986) and new mining wells (Class III). In primacy States, reviews of well records will be conducted for 20% of the existing Class II wells currently authorized by rule. In addition, States will determine whether to permit miscellaneous wells which fall into the Class V category.

As the State permit workload decreases, the States will be able to devote greater effort to bringing violators into compliance and requiring operators to address actual or potential contamination problems. A field presence will demonstrate to the regulated community that the States will exercise their enforcement authority when necessary. When program operators fail to comply, States will initiate appropriate enforcement actions.

Other activities supported by the grants include: maintaining well inventories, compliance tracking with permit conditions and/or rule requirements, technical assistance to operators, training and other data management activities. When EPA implements a program in a State, the funds will be used to support a similar range of activities.

#### 1986 Program

In 1986, the Agency is allocating a total of \$8,708,900 for this program, all of which is from the Abatement, Control and Compliance appropriation.

These funds support programs to protect underground sources of drinking water from contamination through underground injection in all 57 States and Territories, as well as on Indian lands. EPA uses grant funds allotted to 19 full non-primacy and 5 partial non-primacy States and Indian lands to support direct implementation activities. The priorities for permitting by EPA and the States are similar to those in 1987.

Grant funds also support surveillance and compliance activities. The programs' primary means of surveillance is through the receipt and review of operation reports. For this system to be effective, there must be no question about the credibility of operators' data. This requires the program to maintain an effective verification effort. In addition, demonstrated absence of leaks is an important element of compliance. Where violations are evident, appropriate enforcement action is being initiated. States are beginning to emphasize compliance with permit conditions and increasing inspections, mechanical integrity tests (MIT) and surveillance activities.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$8,312,100 for this program, all of which was from the Abatement, Control and Compliance appropriation.

Thirty-three States achieved full primacy and five had partial primacy by the end of 1985. The States completed 180 permit determinations for existing Class I and Class III wells, reviewed 15,509 records for Class II wells, evaluated tests of 19,848 wells for mechanical integrity and witnessed approximately 25 percent of the MITs. In addition, the State compliance and enforcement activities increased with the completion of 46,282 field inspections and initiation of administrative actions, review of monitoring reports, and initiation of 2 new civil litigations.

## SPECIAL STUDIES AND DEMONSTRATIONS

### 1987 Program Request

No funding is requested for this program. This represents a decrease of \$2,248,900 in the Abatement, Control and Compliance appropriation. The decrease represents the Agency's position that the National Rural Water Association has demonstrated the effectiveness of grass roots training and technical assistance programs to benefit small systems and that the individual State associations should be able to move toward self-sufficiency through the use of organizational dues and training fees.

### 1986 Program

In 1986, the Agency is allocating a total of \$2,248,900 for this program, all of which is from the Abatement, Control and Compliance appropriation.

These funds support the training and technical assistance activities of the National Rural Water Association. The National Association, through its 31 currently funded State associations covering 33 States, is providing guidance on ways to promote compliance among rural water systems.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,100,000 for this program, all of which was from the Abatement, Control and Compliance appropriation.

These funds supported the National Rural Water Association's outreach program. The State associations funded a total of 384 workshops in 33 States to train operators of small water systems and provided 3,840 days of technical assistance to these systems.

## TRAINING

### 1987 Program Request

No funds are requested for this program. This represents a decrease of \$239,200 in the Abatement, Control and Compliance appropriation. The decrease represents the Agency's view that there are sufficient opportunities for State personnel to obtain training in environmental and public health fields without Federal support.

### 1986 Program

The Agency is allocating \$239,200 for this program, all of which is from the Abatement, Control and Compliance appropriation. These funds will be used to provide fellowships to State agency personnel involved in the administration and implementation of State PWS and UIC programs.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$214,000 for this program, all of which was from the Abatement, Control and Compliance appropriation.

The funds supported academic training for 84 State agency personnel. Of this total 61 fellowships were awarded to personnel involved in the administration and implementation of State PWS programs and 23 were awarded to personnel involved in the protection of ground water.

# DRINKING WATER

## Drinking Water Management

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
Public Water Systems Supervision Program Assistance							
Salaries & Expenses	\$4,726.7	\$5,090.5	\$5,073.6	-\$218.3	\$4,855.3	\$5,016.6	\$161.3
Abatement Control and Compliance	\$6.0		\$10.0	-\$0.4	\$9.6	\$10.0	\$0.4
TOTAL	\$4,732.7	\$5,090.5	\$5,083.6	-\$218.7	\$4,864.9	\$5,026.6	\$161.7
Underground Injection Control Program							
Salaries & Expenses	\$4,579.4	\$5,804.2	\$5,460.9	-\$234.7	\$5,226.2	\$5,521.3	\$295.1
TOTAL	\$4,579.4	\$5,804.2	\$5,460.9	-\$234.7	\$5,226.2	\$5,521.3	\$295.1
TOTAL:							
Salaries & Expenses	\$9,306.1	\$10,894.7	\$10,534.5	-\$453.0	\$10,081.5	\$10,537.9	\$456.4
Abatement Control and Compliance	\$6.0		\$10.0	-\$0.4	\$9.6	\$10.0	\$0.4
Drinking Water Management							
TOTAL	\$9,312.1	\$10,894.7	\$10,544.5	-\$453.4	\$10,091.1	\$10,547.9	\$456.8
PERMANENT WORKYEARS							
-----							
Public Water Systems Supervision Program Assistance	118.8	121.1	121.6		121.6	121.6	
Underground Injection Control Program	119.0	143.5	141.1		141.1	141.1	
TOTAL PERMANENT WORKYEARS	237.8	264.6	262.7		262.7	262.7	

# DRINKING WATER

## Drinking Water Management

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
TOTAL WORKYEARS							
-----							
Public Water Systems Supervision Program Assistance	130.5	132.4	132.4		132.4	132.4	
Underground Injection Control Program	131.3	154.0	153.9		153.9	153.9	
TOTAL WORKYEARS	261.8	286.4	286.3		286.3	286.3	

## DRINKING WATER

### Drinking Water Management

#### Budget Request

The Agency requests a total of \$10,547,900 supported by 286.3 total workyears for 1987, an increase of \$456,800 and no change in total workyears from 1986. Of the request, \$10,537,900 will be for the Salaries and Expenses appropriation and \$10,000 will be for the Abatement, Control and Compliance appropriation, an increase of \$456,400 and \$400, respectively.

#### Program Description

Two major Regional programs comprise this subactivity.

Public Water Systems Supervision Program Assistance -- This program consists of Regional activities related to national implementation of drinking water regulations to ensure that public water supplies are free of contamination which may pose adverse health effects. The Regional offices provide oversight and support to primacy States in administering Public Water Systems Supervision (PWS) programs and implement programs in those States which do not have primacy and on Indian lands where States do not have civil jurisdiction. The Regions assist States where specific problems are identified, evaluate State programs, and award the PWS grants. The Regions continue to respond to contamination incidents including those (involving unregulated contaminants) which may potentially affect public water supplies.

Underground Injection Control Program -- This program consists of Regional activities related to the protection of underground water sources. The Regions are responsible for ensuring implementation of the Underground Injection Control (UIC) Regulations, either through oversight and assistance to primacy States or Federal implementation in non-primacy States and on Indian lands. They are also responsible for review of sole source aquifer designation petitions. Grant awards for the UIC program are administered by the Regions.

#### PUBLIC WATER SYSTEMS SUPERVISION PROGRAM ASSISTANCE

##### 1987 Program Request

The Agency requests a total of \$5,026,600 supported by 132.4 total workyears, of which \$5,016,600 will be for the Salaries and Expenses appropriation and \$10,000 will be for the Abatement Control and Compliance appropriation. This represents an increase of \$161,300 and \$400, respectively, with no change in total workyears. The increase in Salaries and Expenses is for increased operating costs. The increase in Abatement, Control and Compliance is for data management activities.

The Regions will work with the States in implementing regulations for volatile organic contaminants (VOCs), redirecting program efforts in order to adopt any necessary statutory or regulatory revisions to apply and enforce provisions at least as stringent as the Federal requirements. By early 1988, public water supplies will have to comply with VOC Maximum Contaminant Levels (MCLs). Monitoring and Reporting (M/R) requirements, including monitoring for approximately 50 additional VOCs, will be effective upon promulgation; but States may phase in the measurement requirements overtime, with the smallest systems allowed four years to perform the minimum analytic requirements. The Regions will be available to help States with new analytic techniques and meeting additional laboratory certification requirements. The Regions will also have to review the State programs to ensure their adequacy under primacy criteria.

The new monitoring activities will generate a number of cases of contamination. In a limited number of instances, EPA will assist States, localities, and systems in confirming concentration levels, advising on reliable sampling/analytic procedures and the potential for adverse health effects, investigating the pathways of contamination, and suggesting remedial measures including appropriate treatment technology.

Compliance with existing regulatory requirements will remain a primary measure of environmental effectiveness and thus a chief focus for the PWS Supervision program. While elimination of violations with the microbiology, turbidity and total trihalomethanes standard will continue as a high priority, compliance with the chemical and radiological standards will receive new emphasis. In addition, Regions will track the progress of those systems identified as having significant non-compliance. Regional staff will prepare the necessary technical documentation to assure timely and appropriate Federal enforcement actions are initiated against violations of the Interim primary regulations.

Regions may conduct site visits to laboratories previously certified to spot check for the quality and accuracy of sample analyses, perform mid-year evaluations, and review and verify report data.

#### 1986 Program

In 1986 the Agency is allocating a total of \$4,864,900 supported by 132.4 total workyears for this program, of which \$4,855,300 is from the Salaries and Expenses appropriation and \$9,600 is from the Abatement, Control and Compliance appropriation.

Fifty-four States have assumed primary enforcement authority for the PWS supervision program to assure compliance with Interim Primary Regulations. EPA Regions are working with these primacy States to achieve full compliance, particularly for microbiological and turbidity MCLs and monitoring, so that, overall, the number of community PWSs in persistent non-compliance with MCLs will amount to less than 1% of the national inventory. EPA's goal is to eliminate all such persistent non-compliance by 1988.

EPA is directly implementing the program in three non-primacy States and on Indian lands. In anticipation of implementing the VOC regulations, Regions are engaged in assuring a sufficient laboratory capacity for VOC analyses and working with utilities on analytic and reporting requirements. EPA is intensifying negotiations with Indiana in an effort to delegate the program by 1987. Although Pennsylvania and Oregon will have primacy in 1986, EPA continues to provide transition support in such areas as data management, compliance, follow-up, completion of formal enforcement actions, staff training, and other appropriate activities.

The Regions continue to provide assistance to States and utilities as they respond to contamination of water supplies, such as occurrence of ethylene dibromide (EDB). Other assistance involves the investigation and control of agents causing disease outbreaks including the continuing incidence of gastroenteritis and giardiasis.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$4,732,700 supported by 130.5 total workyears for this program, of which \$4,726,700 was from the Salaries and Expenses appropriation and \$6,000 was from the Abatement, Control and Compliance Appropriation.

The Regions responded to 325 separate instances of reported contamination, either of supplies themselves or potential threats to sources. Serious contamination incidents, involving substantial regional staff time, occurred in every Region.

Among those were 10 investigations of disease outbreaks. Technical assistance varied in extent from simple responses to telephone inquiries to extensive studies of contamination sites including liaison with Superfund actions.

With the delegation to Pennsylvania, 53 State programs are now directly responsible for more than 96% of the Nation's community water systems. Encouragement from the Regional programs (through direct contact and through the negotiation of State grant agreements and program evaluation) has led to a more aggressive State effort to bring systems into compliance with basic public health standards.

#### UNDERGROUND INJECTION CONTROL PROGRAM

##### 1987 Program Request

The Agency requests a total of \$5,521,300 supported by 153.9 total workyears for this program, all of which will be for the Salaries and Expenses appropriation, with no change in total workyears. This represents an increase of \$295,100 for increased operating costs.

EPA is expected to be responsible for program implementation in 20 States and Indian lands during 1987. In four of those States, EPA will be responsible for regulating only certain categories of wells, with the State having assumed primacy for the remaining categories. Since establishing the last of these direct implementation (DI) programs in late 1984, EPA Regions have made their first priority to meet a primary statutory requirement: that no underground injection may take place without an official permit or other means of approval, which implements proper controls and requires periodic monitoring so that the threat of contamination to underground sources of drinking water is prevented. While the permitting process proceeds on a 5-year schedule, the Regions will ensure that the growing number of Federally-permitted wells operate in conformance with permit requirements. This will include conducting inspections, witnessing and reviewing mechanical integrity tests, and conducting record reviews for enhanced recovery wells to identify compliance problems requiring corrective action. Regions will follow up on confirmed or suspected violations to the extent possible by making on-site visits, meeting with violators, and developing compliance schedules. As necessary, they will develop preliminary technical rationales to support more formal enforcement action.

At the same time, the Regions must maintain oversight and provide technical assistance to 41 State programs, which are regulating the preponderance of injection facilities. Matching the priority given to compliance when EPA has direct responsibility, Regions will actively encourage States to assure compliance through inspections, record reviews, and timely mechanical integrity testing and to solve any emerging compliance problems through a combination of technical assistance and enforcement action. Part of this Regional help will be the application of hydrogeological expertise.

##### 1986 Program

In 1986, the Agency is allocating a total of \$5,226,200 supported by 153.9 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

The UIC implementation strategy for permit determinations, where EPA has direct implementation responsibility, is to review all new Class II applications first in accordance with the statutory mandate not to impede oil and gas production. The second priority, existing Class I wells, reflects the Agency's concern about the disposal of hazardous wastes through underground injection. Because of the potential contamination from mining operations, Regions are reviewing existing Class III wells, followed by new Class I and III wells to ensure that construction activities are not hampered. Regions review existing Class II wells as a lower priority because of the 5-year period provided by the regulations. An expanded permitting effort enables the Regions to complete determinations on all existing Class I and III



applications, 20% of existing Class II applications, and new Class I, II, and III applications in 1986. The Regions are also completing the assessment of Class V (miscellaneous) wells in non-primacy jurisdictions, maintaining a current inventory of all injection wells, witnessing mechanical integrity tests for some categories of wells, reviewing monitoring reports, maintaining an accurate and current data base, and conducting surveillance activities to ensure compliance.

The Regions oversee and provide technical assistance to 38 States with primacy at the beginning of 1986, operating 33 full and 5 partial programs. Oversight activities include evaluating State implementation programs, working with the States to identify and address compliance problems, negotiating annual program outputs to meet annual operating objectives, and verifying data to ensure accuracy of information used to report environmental results.

Regions continue to process petitions to designate sole source aquifers and continue to evaluate proposed Federally funded projects in designated sole source aquifer areas to determine if any contamination potential exists and, based upon the determination, make appropriate recommendations to the Administrator. In addition, they provide hydrogeological assistance on groundwater contamination incidents and emergency response, conduct grants and financial management activities, provide training, and coordinate UIC activities with other related programs.

#### 1985 Accomplishments

In 1985 the Agency obligated a total of \$4,579,400 supported by 131.3 total workyears for the program, all of which was from the Salaries and Expenses appropriation.

In December 1984 EPA promulgated regulations establishing UIC programs for the last group of States and for most Indian lands without State primacy. The Regions continued to process State primacy applications and negotiated with States on program plans and implementation activities, delegating full programs in 2 States and partial programs in 3 States during 1985. For those States with primacy, the Regional Offices reviewed compliance and monitoring reports and provided guidance and assistance on mechanical integrity testing and technical program requirements. They reviewed the States' annual report data and processed the information for compilation into the annual report of program accomplishments. They were responsible for managing the State grant program, which included reviewing program plans, negotiating changes, awarding grants, and auditing grants.

In the jurisdictions where EPA was implementing programs, the first priority was the discovery and closure of Class IV wells (injecting hazardous wastes into or above a drinking water source) within 6 months. Other activities involved notification of facility operators of UIC permits and the first issuance of permits. By the end of the fiscal year, EPA had issued 42 permits for existing Class I and III wells, 5 for new Class I and III's and 313 for new Class II oil and gas wells and 64 for existing Class II's. The Regions also reviewed 3,302 Class II well record files and witnessed 3,068 mechanical integrity tests. To date EPA designated 21 sole source aquifers, with 12 more petitions under review.

# DRINKING WATER

## Ground-Water Protection

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
-----								
(DOLLARS IN THOUSANDS)								
PROGRAM								
-----								
Ground-Water Protection								
Salaries & Expenses	\$1,349.4	\$1,388.6	\$1,404.3	-\$60.4	\$1,343.9	\$1,398.3	\$54.4	
Abatement Control and Compliance	\$969.3	\$1,000.0	\$1,000.0	-\$43.0	\$957.0	\$900.0	-\$57.0	
TOTAL	\$2,318.7	\$2,388.6	\$2,404.3	-\$103.4	\$2,300.9	\$2,298.3	-\$2.6	
TOTAL:								
Salaries & Expenses	\$1,349.4	\$1,388.6	\$1,404.3	-\$60.4	\$1,343.9	\$1,398.3	\$54.4	
Abatement Control and Compliance	\$969.3	\$1,000.0	\$1,000.0	-\$43.0	\$957.0	\$900.0	-\$57.0	
Ground-Water Protection	TOTAL	\$2,318.7	\$2,388.6	\$2,404.3	-\$103.4	\$2,300.9	\$2,298.3	-\$2.6
PERMANENT WORKYEARS								
-----								
Ground-Water Protection	23.7	28.0	27.3		27.3	27.3		
TOTAL PERMANENT WORKYEARS	23.7	28.0	27.3		27.3	27.3		
TOTAL WORKYEARS								
-----								
Ground-Water Protection	26.4	28.0	28.0		28.0	28.0		
TOTAL WORKYEARS	26.4	28.0	28.0		28.0	28.0		

## DRINKING WATER

### Ground-Water Protection

#### Budget Request

The Agency requests a total of \$2,298,300 supported by 28.0 total workyears for 1987, a decrease of \$2,600 and no change in total workyears. Of the request, \$1,398,300 will be for the Salaries and Expenses appropriation and \$900,000 will be for the Abatement, Control and Compliance appropriation, an increase of \$54,400 and a decrease of \$57,000, respectively.

#### Program Description

Ground-Water Protection -- The ground-water protection program focuses actions under current authorities to protect the Nation's ground water. The program's major objectives include: building and enhancing institutions at the State level; coordinating ground-water protection activities across EPA programs; providing assistance in addressing problems that arise from sources of ground-water contamination that are of national concern; and implementing guidelines for EPA decisions affecting ground-water protection and cleanup. Both Headquarters and Regional staffs are supported by this program.

#### GROUND-WATER PROTECTION

##### 1987 Program Request

The Agency requests a total of \$2,298,300 supported by 28.0 total workyears for this program, of which \$1,398,300 will be for the Salaries and Expenses appropriation and \$900,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$54,400 and a decrease of \$57,000, respectively, and no change in total workyears. The increase in Salaries and Expenses reflects adjustments to the 1986 base as part of the government wide deficit reductions. The decrease in Abatement, Control and Compliance reflects the completion of some public information activities.

EPA and the Regions working with States will continue to implement the Ground-Water Protection Strategy. Headquarters and Regions will jointly conduct State program development workshops to exchange information among States and to identify common technical and management problems and experiences.

The Agency will implement the ground-water monitoring strategy, which will provide decision makers (at the EPA, State, and site manager levels) the data necessary to make decisions relating to ground water. One major aspect of that effort will be to use existing data systems to design a ground-water information program with capacity to store, shape, and analyze ground-water quality data collected by EPA States and private industry and other ground-water systems. Workshops will be held with the States in cooperation with United States Geological Survey (USGS) to assist States in developing their own ground-water data management systems. Technical Information Publications (TIPs) will be developed for local managers that describe successful practices for dealing with selected activities affecting ground-water quality.

During 1987, the Agency will incorporate ground-water classification guidelines, as appropriate, into the policies, regulations, and procedures administered in several Agency programs dealing with ground water. Headquarters and Regions will work with the States to implement the Pesticides in Ground Water Strategy.

Headquarters and the Regions will manage internal coordinating committees to assure that major ground-water policy questions are addressed. External coordina-

ting committees will be managed to ensure involvement of key groups such as State and local governments and other Federal agencies. Memoranda of Understanding between EPA and the U.S. Geological Survey and EPA and the Bureau of Reclamation will be implemented. EPA will coordinate the implementation of the recommendations made by a Science Advisory Board committee review of EPA ground-water research. The Agency will continue a public information program to inform the public on EPA protection activities.

#### 1986 Program

In 1986, the Agency is allocating a total of \$2,300,900 supported by 28.0 total workyears to this program, of which \$1,343,900 is for the Salaries and Expenses appropriation and \$957,000 is for the Abatement, Control and Compliance appropriation.

Through the Regions, Headquarters is supporting State strategy development with EPA grant funds. Headquarters and Regions are conducting workshops with the States focusing on elements of successful State ground-water programs and how they might be incorporated into State programs, the ground-water monitoring and data management systems, and greater coordination and support from other Federal agencies. All of these efforts are oriented toward helping each State complete a comprehensive State ground-water strategy and toward developing State programs.

A liaison group of a dozen national organizations representing State and local governments is meeting to exchange information and ideas on intergovernmental ground-water protection efforts. This group is assisting EPA in helping States improve their programs and work toward agreed-upon approaches to ground-water protection. Under an EPA grant, a university consortium is holding several ground-water symposia to provide a forum for analysis and examination of public policy issues of importance to State and local officials. In addition to offering an opportunity for examination of issues, the symposia will result in a publication on public policy choices and their implications for State and local officials responsible for ground-water quality management. Selected provisions of the Ground-Water Monitoring Strategy are being implemented in 1986. These initial efforts will focus on ground-water information collection efforts in EPA and other agencies to provide greater access to existing information and to yield a better understanding of ground-water contamination sources. This effort utilizes existing data systems.

Headquarters is working with States, Regions, and public representatives to develop TIPs on various control/cleanup technologies, including a publication on how to reduce ground-water pollution from septic systems. Headquarters and the Regions are working with the Office of Pesticides and Toxic Substances to implement selected provisions of the Pesticides in Ground-Water Strategy.

In cooperation with States and USGS, various EPA offices are undertaking studies and surveys of special ground-water concerns, e.g., a survey of surface impoundments, landfills and municipal lagoons to identify the extent of real and potential contamination from these sources as required under the Resource Conservation Recovery Act (RCRA) reauthorization. The ground-water program is working to support these efforts.

In 1986 the Ground-Water Guidelines are being incorporated into several EPA programs and workshops will be held with the Regions and the States to provide technical and management assistance. The Agency is continuing to improve coordination of ground-water protection activities among EPA programs. Headquarters and the Regions will manage internal and external coordinating committees established in 1985 to ensure that major policy questions are addressed and to ensure appropriate involvement of key constituency groups.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,318,700 supported by 26.4 total workyears, of which \$1,349,400 was from the Salaries and Expenses appropriation and \$969,300 was from the Abatement, Control and Compliance appropriation.

In 1985, EPA awarded Section 106 grants to States in part to initiate comprehensive strategies or develop State ground-water programs. The first compendium of descriptions of State ground-water programs was developed and distributed to the States. A liaison group of a dozen State and local organizations was formed to exchange information on intergovernmental ground-water protection efforts. Under an EPA grant, a university consortium held ground-water symposia on State and local ground-water issues.

A draft ground-water monitoring strategy was developed to help in coordinating ground-water information collection in EPA and other Agencies. A Pesticides in Ground Water Strategy was initiated with the Office of Pesticide Programs to address pesticide contamination of ground water and a TSCA Ground-Water Strategy was developed with the Toxics program to incorporate ground-water criteria into risk assessments of new and existing chemicals to determine if actions are needed to prevent or reduce ground-water contamination from these substances. EPA started development of the ground-water classification guidelines that define ground water according to use and vulnerability. Memoranda of Understanding were developed with USGS to clarify the roles of EPA and USGS for ground-water protection, and with the Bureau of Reclamation for coordination of the High Plains Aquifer Demonstration Program.



# **Enforcement**





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# DRINKING WATER

## Drinking Water Enforcement

		ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----								
(DOLLARS IN THOUSANDS)								
-----								
PROGRAM								
-----								
Drinking Water Enforcement								
Salaries & Expenses		\$1,120.7	\$1,388.5	\$1,251.9	-\$53.8	\$1,198.1	\$1,248.3	\$50.2
TOTAL		\$1,120.7	\$1,388.5	\$1,251.9	-\$53.8	\$1,198.1	\$1,248.3	\$50.2
TOTAL:								
Salaries & Expenses		\$1,120.7	\$1,388.5	\$1,251.9	-\$53.8	\$1,198.1	\$1,248.3	\$50.2
Drinking Water Enforcement	TOTAL	\$1,120.7	\$1,388.5	\$1,251.9	-\$53.8	\$1,198.1	\$1,248.3	\$50.2
PERMANENT WORKYEARS								
-----								
Drinking Water Enforcement		29.4	30.3	32.0		32.0	32.0	
TOTAL PERMANENT WORKYEARS		29.4	30.3	32.0		32.0	32.0	
TOTAL WORKYEARS								
-----								
Drinking Water Enforcement		32.5	33.7	33.7		33.7	33.7	
TOTAL WORKYEARS		32.5	33.7	33.7		33.7	33.7	

## DRINKING WATER

### Drinking Water Enforcement

#### Budget Request

The Agency requests a total of \$1,248,300 supported by 33.7 total workyears for 1987, an increase of \$50,200 and no change in total workyears from 1986. All of the request will be for the Salaries and Expenses appropriation.

#### Program Description

Drinking Water Enforcement -- The program serves to ensure national compliance by public water systems (PWS) and underground injection control (UIC) operators with the requirements of the Safe Drinking Water Act (SDWA) in both primacy and non-primacy States as well as Indian lands. The program covers compliance strategy development, national policy and guidance development, technical support for judicial enforcement actions, and administrative aspects of the UIC permit determination process. In the PWS Regional enforcement program, technical support is provided in legal actions against violators of the Primary Drinking Water Regulations in non-primacy State jurisdictions. In addition, the Regions, with State involvement, prepare documentation for enforcement actions relating to recalcitrant violators in primacy States. The PWS enforcement activity also encompasses review of State primacy programs for compliance with newly promulgated regulations.

The Regional UIC enforcement program ensures compliance with the underground injection control regulations primarily in non-primacy States and on Indian lands. Enforcement actions are initiated against recalcitrant violators in primacy States when appropriate. The UIC enforcement program is also responsible for the administrative aspects of the UIC permit issuance as well as the review of primacy applications.

#### DRINKING WATER ENFORCEMENT

##### 1987 Program Request

The Agency requests a total of \$1,248,300 supported by 33.7 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$50,200 and no change in total workyears. The increase reflects adjustments to the 1986 base as part of the government-wide deficit reductions.

Regional PWS enforcement activities involve enforcing the drinking water standards in non-primacy States and on Indian lands for which EPA has direct implementation responsibilities. Regions will also pursue selective enforcement actions in primacy States which are unwilling or unable to take direct action against violators. In the past, for a variety of reasons, many States have not actively pursued enforcement against violators of the SDWA. Selected EPA enforcement actions will reinforce EPA's intention to enforce the SDWA. Notices of violation and formal enforcement actions will be developed for Department of Justice (DOJ) referral against violators of the microbiological and chemical maximum contaminant levels. Case documentation will be prepared in coordination with the Regional Counsels' offices to assure appropriate and accurate documentation. Continued support will be provided to address the prior year civil referrals already at DOJ.

Permitting is the cornerstone of the UIC regulatory program: it provides the means to protect underground sources of drinking water most efficiently by taking into account site specific circumstances while managing the controlled disposal of hazardous wastes and other substances. Consulting UIC technical personnel, the Regional enforcement staff will process the permit applications and perform the administrative activities such as setting up pre-application conferences, public

hearings and review of public comments associated with permit issuance. The technical review of permit applications is provided under the Regional UIC program. Priorities for issuing UIC permits are consistent with those identified for the technical program. The Regional enforcement staff will issue permit determinations on 624 applications.

Monitoring of compliance with UIC permit conditions will gradually increase. The phase-in of permitting and other program responsibilities, coupled with the expanded field presence in the EPA administered UIC program, will generate a growing enforcement workload. There will be a certain number of permit denials, eliciting appeals and closures of on-going operations where necessary. Failures by operators to apply, test, or report will all require action to obtain compliance. The Regions will selectively prepare litigation reports and affidavits, conduct on-site investigations, and review files and records in preparation for court referrals, provide court testimony, follow-up on court orders, assist courts in penalty determinations, and track consent decrees.

At the national level, continued oversight and monitoring of enforcement action in both the PWS and UIC programs will be coordinated with the Office of Enforcement and Compliance Monitoring (OECM). The PWS Compliance Strategy will undergo substantial revision to reflect the added responsibilities for compliance with new contaminant standards and treatment technology requirements. Focus on compliance with chemical and radiation standards will require reassessment of enforcement priorities which currently emphasize microbiological compliance. Emerging UIC enforcement cases will be reviewed to ensure national consistency on interpreting regulatory requirements and to determine areas where additional guidance is necessary.

#### 1986 Program

In 1986, the Agency is allocating a total of \$1,198,100 supported by 33.7 total workyears for the program, all of which is from the Salaries and Expenses appropriation.

At the Headquarters level, procedures for processing UIC permit appeals will be developed as well as guidance on loss of authorization and other issues identified as implementation of the UIC regulatory programs proceed.

Regional PWS enforcement activities continue to focus on compliance and enforcement against persistent and recalcitrant violators in non-primacy States and Indian lands while continuing to support referrals at DOJ from prior years. As part of this effort compliance targets and schedules are being negotiated with systems in violation of MCLs and technical support in preparing case documentation and testimony is being provided. Enforcement actions against recalcitrant violators in primacy States are being initiated with State input, as part of the Agency's compliance and enforcement policies.

While UIC permit issuance continues to be a high priority, the Regions are beginning to act against owners/operators in violation of the UIC regulations. Currently, this activity concentrates on violations in non-primacy States and Indian lands. The Regions are reviewing compliance reports, inspection data, and mechanical integrity test (MIT) information to determine when enforcement actions should be initiated. They are issuing letters of violation to any Class II or V injection well for failure to submit inventory information and a timely permit application and for failure to comply with a request for information.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,120,700 supported by 32.5 total workyears for this program, all of which was from the Salaries and Expenses appropriation.

To improve compliance among small systems with the microbiological and turbidity MCLs, the enforcement and technical staffs worked together in negotiating compliance targets and schedules with systems in violation of MCLs. They provided support for the 21 civil actions referred to the Office of Enforcement and Compliance Monitoring by developing supporting documentation and providing expert testimony.

Regional UIC enforcement activities continued to focus on the administrative aspects of permit issuance in non-primacy jurisdictions, including Indian lands. They conducted administrative reviews of permit applications, worked with the program staff in the review of the technical aspects of the permit, conducted public hearings as necessary, issued the final permit, and in a few instances processed permit appeals.



# **Hazardous Waste**





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## HAZARDOUS WASTE

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
APPROPRIATION							
Salaries & Expenses	\$52,544.7	\$61,435.7	\$63,315.7	-\$2,722.3	\$60,593.4	\$66,175.2	\$5,581.8
Abatement Control and Compliance	\$109,860.5	\$140,292.0	\$145,342.0	-\$6,249.5	\$139,092.5	\$153,692.0	\$14,599.5
Research & Development	\$31,670.4	\$35,626.1	\$39,886.7	-\$1,715.0	\$38,171.7	\$36,369.0	-\$1,802.7
TOTAL, Hazardous Waste	\$194,075.6	\$237,353.8	\$248,544.4	-\$10,686.8	\$237,857.6	\$256,236.2	\$18,378.6
PERMANENT WORKYEARS	1,045.2	1,217.9	1,284.5		1,284.5	1,301.3	16.8
TOTAL WORKYEARS	1,176.2	1,367.9	1,442.5		1,442.5	1,462.3	19.8
OUTLAYS	\$150,793.3	\$197,408.7	\$214,677.5	-\$5,595.5	\$209,082.0	\$239,991.5	\$30,909.5
AUTHORIZATION LEVELS	The Hazardous and Solid Waste Amendments of 1984 reauthorized this program at a level of \$232,246.0 for 1985, \$252,408.3 for 1986 and \$248,529.0 for 1987.						

## HAZARDOUS WASTE

### OVERVIEW AND STRATEGY

The Resource Conservation and Recovery Act (RCRA), as revised by the Hazardous and Solid Waste Amendments (HSWA) of 1984, provides the legislative mandate for a nationwide program to manage hazardous wastes from generation through disposal. Much remains to be accomplished in protecting human health and the environment from current hazardous waste management practices. Numerous wastes are not adequately regulated, and many facilities are not in compliance with regulatory standards. In addition, many facilities have solid waste management units that were previously unregulated but which now must be addressed to protect the human health and the environment. Some States lack the legal authority, technical skills, or resources to take timely and appropriate enforcement action. To address these problems, the Agency has developed a strategy which encompasses five major objectives. These are to (1) implement strong State programs; (2) improve permitting performance; (3) strengthen compliance monitoring and enforcement; (4) develop new and review existing regulations; and (5) conduct research and development to support regulatory programs. The 1987 request for hazardous waste includes sufficient resources to carry out these objectives.

#### Implement Strong State Programs

The effective management of hazardous wastes is dependent on a strong Federal/State partnership. The Agency will continue to help States assume full authorization by providing direct program assistance, training, guidance, and financial support. In addition, the Agency will assist the States in upgrading their program capabilities to meet new and modified Federal standards. The Agency and the States will continue to operate within the Interim National Criteria. These criteria define the key factors and performance expectations for managing and evaluating the RCRA program.

States will continue to develop schedules for revisions which incorporate the 1984 Amendments. The Agency and the States will jointly examine existing State statutory and regulatory authorities to determine what amendments are needed. The schedule for incorporating the 1984 Amendments and for achieving the subsequent authorization will be developed. The Agency will provide grant bonuses as incentives to States that more rapidly become authorized for HSWA provisions.

#### Improve Permitting Performance

A major objective of the permit program is to permit all operating land disposal facilities by 1988 and all incineration facilities by the end of 1989, both of which are statutory deadlines.

Permitting activities are significantly affected by the 1984 Amendments, resulting in a more extensive permit processing program. Permits issued after November 8, 1984 must incorporate 1984 Amendment provisions (e.g., double liners, corrective action for prior releases, and exposure assessments) when applicable. Submission and review of information related to the 1984 Amendments will add time to the permitting process. Not only will the length of the permit process be extended, but the additional requirements also entail more extensive effort on each permit, particularly regarding corrective action of releases from solid waste management units. HSWA has also caused a significant number of land disposal facilities to close, generating an increasing closure plan review workload in the Regions and States.

The Agency and the States will jointly process and issue permits. Authorized States will issue the portions of a RCRA permit that include pre-HSWA program requirements and any HSWA provisions for which they are authorized. The Agency will be responsible for preparing those portions of the permit that include HSWA provisions for which a State is not authorized. Implementation of facility management planning will be a priority in 1987. A strategy to bring each major facility into compliance with all applicable requirements will be developed through planning and coordination between Regions and States.

## Strengthen Compliance Monitoring And Enforcement

The program will continue to emphasize compliance at land disposal facilities. The 1984 Amendments required interim status land disposal facilities to certify the compliance of their units with ground water monitoring and financial responsibility requirements and submit a permit application by November 1985. Facilities which did not meet these requirements lost interim status for those units and are required to close them. Many facilities did not retain interim status. Inspections and appropriate enforcement actions will be made at these facilities as well as at facilities that continue to operate.

Corrective action measures are another major component of the program. Corrective action authorities provided under HSWA will be employed at facilities to investigate and remediate releases and off boundary contamination that may threaten human health and the environment. Extensive use of these authorities will be used at facilities where releases have been identified or are suspected.

The 1984 Amendments mandate the annual inspection of Federal, State, and local government owned or operated facilities. Annual inspections at all land disposal facilities will also be made. Incineration and storage/treatment facilities will be inspected at least once every two years.

The RCRA enforcement program will initiate appropriate administrative, civil, and criminal enforcement actions when violations of hazardous waste management requirements are discovered. The program will continue to emphasize timely and appropriate enforcement action for non-compliance, especially those that pertain to ground water and inadequate permit applications. The implementation of the RCRA Ground Water Monitoring Technical Enforcement Guidance and the Enforcement Response and Civil Penalty Policies will ultimately lead to significant improvements in the rate of compliance with the RCRA program.

Under the 1984 Amendments, the number of handlers subject to the RCRA regulations has greatly expanded, due to the regulation of small quantity generators and underground storage tanks. Outreach and compliance activities especially designed for these handlers, many of whom are small businesses, will be undertaken.

## Develop New and Revise Existing Regulations

The most challenging provisions of the 1984 Amendments are those that ban or restrict the disposal of hazardous waste on land. The 1984 Amendments promote a shift toward recycling, reducing wastes generated, and using more sophisticated treatment and destruction techniques. The Agency will restrict the land disposal of certain hazardous wastes to protect ground water and air.

The major issues facing the hazardous waste management program will be addressed by a coordinated Agency effort to move towards greater reliance upon risk-based decisions. These issues include corrective action policies, a comprehensive listing and delisting strategy, and the development of risk-based site specific decisions regarding petitions to land disposal restrictions.

The 1984 Amendments greatly increase the scope of activities to be regulated under the hazardous waste management program. The Agency will continue to close gaps in the regulatory framework by conducting public education programs for the expanded regulated community of over 100,000 small quantity generators, continue to bring additional wastes under regulation, and provide expanded closure and post closure regulations as well as regulations for corrective action where needed. In support of efforts to protect ground water, the Agency will revise Appendix VIII ground water monitoring provisions and alternate concentration levels.

Of great significance is the fact that the 1984 Amendments apply to the underground storage of products as well as wastes. A regulatory strategy will be developed for over a million underground storage tanks which contain petroleum products and hazardous substances. Over the short term, the Agency will develop

guidance, conduct economic analyses, and establish a notification and compliance program. Over the longer term, the Agency will issue regulations providing standards for new tanks, develop methods for leak detection and corrective actions for releases, and design effective enforcement strategies.

Other major activities include developing regulations for controlling toxic air emissions at hazardous waste treatment, storage, and disposal facilities; determining whether deep well injection of hazardous wastes is sufficiently protective of human health and the environment; developing criteria for reviewing requests for exemption from requirements to retrofit surface impoundments; developing regulations for hazardous waste burned as fuel and for managing used oil; and studying Section 8002 large volume wastes.

The 1984 Amendments include minimum technology requirements which establish major changes in the way hazardous waste is disposed. Land disposal regulations will reflect requirements to install double liner and leachate collection and removal systems as well as to ban the placement of bulk liquid hazardous waste into landfill facilities. Similarly, the Agency will examine the nature and extent of the hazardous waste problem at Subtitle D facilities and revise existing criteria, if appropriate.

#### Conduct Research And Development To Support Regulatory Program

The 1987 research and development program will develop scientific and technical information to support regulatory initiatives. Major thrusts include development of generic analytical methods to identify hazardous wastes and standardization of subsurface monitoring methods for more reliable groundwater monitoring. Alternatives to conventional means of disposing and destroying wastes will continue to be evaluated and additional risk assessments will be performed to support listing and waste banning decisions. Engineering and monitoring studies will support development of methods to improve the installation, design, and monitoring of underground storage tanks.

#### Outputs Reflect Shifting Workload

The estimated outputs for the hazardous waste program in 1986 and 1987 reflect increases in enforcement activities, with much of this due to the emphasis on compliance and corrective action at land disposal facilities. The decreases for regulatory activities reflect completion of some efforts and a shift toward implementation guidance work. Also, several of the remaining regulatory efforts in 1987 are the most complex and resource intensive, such as land banning and underground storage tanks. The implementation outputs show a decrease in the number of states receiving full authorization for pre-HSWA due to all participating States being authorized in 1986. Additionally, the permitting final determinations are decreasing to reflect the large number of facilities that are no longer seeking operating permits and had closure plans approved in 1986.

## HAZARDOUS WASTE

PROGRAM ACTIVITIES	Actual 1985	Budget Estimate 1986	Current Estimate 1986	Estimate 1987	Increase (+) Decrease (-) 1987 vs. 1986
<u>Regulations and Guidance</u>					
RCRA Standards:	11	20	38	28	-10
Proposals.....	9	12	21	11	-10
Promulgations.....	2	8	17	17	---
Section 3001 Listings:	11	17	23	18	-5
Proposals.....	9	8	12	6	-6
Promulgations.....	2	9	11	12	+1
Implementation					
Guidances.....	20	31	29	38	+9
Reports to Congress....	2	2	6	4	-2
<u>Implementation</u>					
State Authorization:					
Full.....	22	17	25	0	-25
Full (Cumulative)....	26	52	51	51	0
Permit Call-Ins*.....	679	---	150	800	+650
(Cumulative)*....	4,067	3,942	4,349	5,149	+800
Final Determinations*..	298	502	922	830	-92
(Cumulative)*....	1,585	1,438	2,507	3,337	+830
<u>Enforcement Actions*</u>					
Inspections.....	16,098	11,834	10,125	10,480	+355
Administrative Orders..	1,624	3,022	2,690	2,742	+52
Civil Litigation.....	149	215	257	286	+29
Criminal Litigation....	82	35	83	83	0
Corrective Action					
Preliminary					
Investigations.....	---	---	683	886	+203

\* Includes both EPA and States.

NOTE: All outputs are incremental except as indicated.

# **Research and Development**





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## HAZARDOUS WASTE

## Hazardous Waste Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
----- (DOLLARS IN THOUSANDS) -----							
PROGRAM							
-----							
Scientific Assessment - Hazardous Waste							
Salaries & Expenses	\$1,107.8	\$1,199.9	\$1,199.9	-\$51.5	\$1,148.4	\$1,331.5	\$183.1
Research & Development	\$2,189.2	\$1,633.8	\$2,731.8	-\$117.5	\$2,614.3	\$3,062.0	\$447.7
TOTAL	\$3,297.0	\$2,833.7	\$3,931.7	-\$169.0	\$3,762.7	\$4,393.5	\$630.8
Monitoring Systems & Quality Assurance - Hazardous Waste							
Salaries & Expenses	\$4,127.6	\$3,826.0	\$3,825.6	-\$164.5	\$3,661.1	\$3,635.8	-\$25.3
Research & Development	\$6,706.0	\$11,917.8	\$11,705.3	-\$503.3	\$11,202.0	\$11,203.0	\$1.0
TOTAL	\$10,833.6	\$15,743.8	\$15,530.9	-\$667.8	\$14,863.1	\$14,838.8	-\$24.3
Health Effects - Hazardous Waste							
Salaries & Expenses	\$781.3	\$849.4	\$889.2	-\$38.2	\$851.0	\$652.1	-\$198.9
Research & Development	\$995.6	\$937.3	\$1,132.0	-\$48.6	\$1,083.4	\$1,756.0	\$672.6
TOTAL	\$1,776.9	\$1,786.7	\$2,021.2	-\$86.8	\$1,934.4	\$2,408.1	\$473.7
Environmental Engineering & Technology - Hazardous Waste							
Salaries & Expenses	\$5,353.0	\$5,227.5	\$5,102.1	-\$219.4	\$4,882.7	\$5,429.1	\$546.4
Research & Development	\$16,100.9	\$15,597.9	\$15,622.2	-\$671.7	\$14,950.5	\$13,808.0	-\$1,142.5
TOTAL	\$21,453.9	\$20,825.4	\$20,724.3	-\$891.1	\$19,833.2	\$19,237.1	\$596.1

## HAZARDOUS WASTE

## Hazardous Waste Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
-----								
(DOLLARS IN THOUSANDS)								
Environmental Processes & Effects - Hazardous Waste								
Salaries & Expenses	\$3,513.2	\$3,209.9	\$3,258.6	-\$140.0	\$3,118.6	\$3,157.5	\$38.9	
Research & Development	\$4,572.9	\$5,539.3	\$6,195.4	-\$266.4	\$5,929.0	\$6,540.0	\$611.0	
TOTAL	\$8,086.1	\$8,749.2	\$9,454.0	-\$406.4	\$9,047.6	\$9,697.5	\$649.9	
Integrated Hazardous Waste Research								
Research & Development	\$1,105.8		\$2,500.0	-\$107.5	\$2,392.5		-\$2,392.5	
TOTAL	\$1,105.8		\$2,500.0	-\$107.5	\$2,392.5		-\$2,392.5	
TOTAL:								
Salaries & Expenses	\$14,882.9	\$14,312.7	\$14,275.4	-\$613.6	\$13,661.8	\$14,206.0	\$544.2	
Research & Development	\$31,670.4	\$35,626.1	\$39,886.7	-\$1,715.0	\$38,171.7	\$36,369.0	-\$1,802.7	
Hazardous Waste Research	TOTAL	\$46,553.3	\$49,938.8	\$54,162.1	-\$2,328.6	\$51,833.5	\$50,575.0	-\$1,258.5
PERMANENT WORKYEARS								
-----								
Scientific Assessment - Hazardous Waste	18.6	17.5	18.0		18.0	22.0	4.0	
Monitoring Systems & Quality Assurance - Hazardous Waste	35.9	40.5	40.5		40.5	41.5	1.0	
Health Effects - Hazardous Waste	6.0	12.0	12.0		12.0	11.0	-1.0	

## HAZARDOUS WASTE

## Hazardous Waste Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
Environmental Engineering & Technology - Hazardous Waste	85.7	83.4	87.9		87.9	87.9	
Environmental Processes & Effects - Hazardous Waste	50.9	44.4	45.7		45.7	46.7	1.0
TOTAL PERMANENT WORKYEARS	197.1	197.8	204.1		204.1	209.1	5.0
TOTAL WOPYEARS -----							
Scientific Assessment - Hazardous Waste	23.6	22.5	22.5		22.5	24.5	2.0
Monitoring Systems & Quality Assurance - Hazardous Waste	40.2	47.5	47.5		47.5	48.5	1.0
Health Effects - Hazardous Waste	6.9	12.0	12.0		12.0	12.0	
Environmental Engineering & Technology - Hazardous Waste	101.4	101.2	99.9		99.9	99.9	

# HAZARDOUS WASTE

## Hazardous Waste Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
Environmental Processes & Effects - Hazardous Waste	57.4	58.1	58.1		58.1	58.1	
TOTAL WORKYEARS	229.5	241.3	240.0		240.0	243.0	3.0

## HAZARDOUS WASTE

### Hazardous Waste Research

#### Principal Outputs by Objective

##### 1987 PLANNED OUTPUTS

=====

##### Objective 1: Develop Data to Support the Use of Alternative Technologies

- o Manual on Field Applications of Alternative Methods Applicable to High Hazard Wastes (Env. Technology)

##### Objective 2: Develop and Evaluate Tests and Procedures for Conducting Risk Assessments

- o Screening methods for detecting mutagenesis and carcinogenesis in RCRA wastes (Health)

##### Objective 3: Conduct the Assessment and Control Research Necessary to Address Dioxin

- o Report on bioaccumulation of TCDD in large animals from contaminated soils (Env. Processes)

##### Objective 4: Develop Procedures to Identify and Measure Chemicals in Wastes

- o Report on the quality of Subtitle D monitoring data (Monitoring)
- o Report on the use of generic GC/MS analytical methods (Monitoring)

##### Objective 5: Develop Data to Support Implementation of the Land Disposal Regulations

- o Expert system for permitting of land disposal facilities (Env. Technology)

##### Objective 6: Develop Data to Support Implementation of the Incineration Regulations

- o Report on the thermal destruction requirements of dioxin-contaminated wastes (Env. Technology)

##### Objective 7: Provide Quality Assurance Support to the Hazardous Waste Program

- o Assessment of Q/A guidance for measuring pollution in ground water (Monitoring)

##### Objective 8: Develop Procedures to Prevent and Contain Hazardous Releases

- o Report on geophysical and geochemical techniques for UST monitoring (Monitoring)
- o Report on non-destructive techniques for locating subsurface residuals and chemical containers (Env. Technology)

##### 1986 PLANNED OUTPUTS

=====

##### Objective 1: Develop Data to Support the Use of Alternative Technologies

- o Reports on effectiveness of alternative treatments for banned wastes (Env. Technology)

Objective 2: Develop and Evaluate Tests and Procedures for Conducting Risk Assessments

- o Report on in-vivo/in-vitro multidisciplinary screen for evaluating wastes (Health)

Objective 3: Conduct the Assessment and Control Research Necessary to Address Dioxin

- o Interim report on field evaluations of the ability of APEG to destroy dioxins in soils (Env. Technology)

Objective 4: Develop Procedures to Identify and Measure Chemicals in Wastes

- o Report on the use of borehole geophysics for ground water monitoring (Monitoring)

Objective 5: Develop Data to Support Implementation of the Land Disposal Regulations

- o Report on updated design information on clay landfill liners (Env. Technology)

Objective 6: Develop Data to Support Implementation of the Incineration Regulations

- o Reports on incinerator and industrial boiler operating parameters to ensure waste destruction (Env. Technology)

Objective 7: Provide Quality Assurance Support to the Hazardous Waste Program

- o Report on externalization of the Repository Program (Monitoring)

Objective 8: Develop Procedures to Prevent and Contain Hazardous Wastes

- o Report on physical principles and basic monitoring methods for UST (Monitoring)

1985 ACTUAL OUTPUTS

=====

Objective 1: Develop Data to Support the Use of Alternative Technologies

- o Report on innovative removal methods for heavy metals (Env. Technology)

Objective 2: Develop and Evaluate Tests and Procedures for Conducting Risk Assessments

- o Preparation of 94 Health and Environmental Effects Profiles (Sci. Assessment)
- o Standardized system to evaluate ground water pollution potential (Env. Processes)

Objective 3: Conduct the Assessment and Control Research Necessary to Address Dioxin

- o Interim Report on Dioxin Emissions from Industrial Boilers (Env. Technology)
- o Report on the mobility of 2,3,7,8-TCDD in soils (Env. Processes)

Objective 4: Develop Procedures to Identify and Measure Chemicals in Wastes

- o Report on ground water monitoring using optical fibers and optrodes (Monitoring)

Objective 5: Develop Data to Support Implementation of the Land Disposal Regulations

- o Report on the status of underground storage of wastes (Env. Technology)

Objective 6: Develop Data to Support Implementation of the Incineration Regulations

- o Report on the performance of eight full scale incinerators (Env. Technology)

Objective 7: Provide Quality Assurance Support to the Hazardous Waste Program

- o Report on the hazardous waste bank materials (Monitoring)
- o Report on development of standard reference materials (Monitoring)

Objective 8: Develop Procedures to Prevent and Contain Hazardous Wastes

- o Summary report on remote sensing for hazardous spills (Monitoring)
- o Report on the design of hazardous leakage controls (Env. Technology)



## HAZARDOUS WASTE

### Hazardous Waste Research

#### Budget Request

The Agency requests a total of \$50,575,000 supported by 243.0 total workyears for 1987, a decrease of \$1,258,500 and an increase of 3.0 total workyears from 1986. Of the request, \$14,206,000 will be for the Salaries and Expenses appropriation and \$36,369,000 will be for the Research and Development appropriation, an increase of \$544,200 and a decrease of \$1,802,700, respectively.

#### Program Description

The Resource Conservation and Recovery Act (RCRA) authorizes a regulatory program to identify those wastes which pose a substantial hazard to human health or the environment, and management standards sufficient to prevent such harm. Research in this program provides the scientific and engineering basis for characterizing and determining the extent of the problems and for formulating controls.

Objective 1: Develop Data to Support the Use of Alternative Technologies. Research supporting this objective is being used in implementing the portions of RCRA that require the banning of high hazard wastes from land disposal. The effectiveness of treatment alternatives and waste altering processes is being evaluated and performance parameters established.

Objective 2: Develop and Evaluate Tests and Procedures for Conducting Risk Assessments. Research supporting this objective will provide more applicable, less expensive, simpler, and more accurate risk assessment methodologies, as well as actual risk assessments for decision-making.

Objective 3: Conduct the Assessment and Control Research Necessary to Address Dioxin. Research supporting this objective will determine the nature and extent of dioxin contamination in the U.S., evaluate the potential for human and environmental effects, and determine the efficacy and costs of potential control technologies.

Objective 4: Develop Procedures to Identify and Measure Chemicals in Wastes. Research develops and validates the analytical procedures and techniques required to characterize wastes for Sections 3001 and 3013 of RCRA. These are used for listing and other regulatory decisions made by the Office of Solid Waste.

Objective 5: Develop Data to Support Implementation of the Land Disposal Regulations. Research supporting this objective provides support for permitting of land disposal and land treatment facilities, and for improvements in operation and design requirements.

Objective 6: Develop Data to Support Implementation of the Incineration Regulations. Laboratory, pilot and full-scale units are investigated to determine the performance of a range of thermal treatment devices. Results are used by permitting officials to evaluate permit requests and in monitoring for compliance with performance requirements.

Objective 7: Provide Quality Assurance Support to the Hazardous Waste Program. A quality assurance program is being conducted to provide a scientific data base of known quality to support RCRA regulatory activities. The program includes a repository of calibration standards, reference materials and on-site evaluations of contractor laboratories.

Objective 8: Develop Procedures to Prevent and Contain Hazardous Releases. Research supporting this objective addresses requirements established by the Clean Water Act (CWA) and RCRA's Underground Storage Tank (UST) program. Research supporting these programs assesses the most cost-effective technology and scientific techniques available to prevent and control releases of hazardous substances.

## SCIENTIFIC ASSESSMENT

### 1987 Program Request

The Agency requests a total of \$4,393,500 supported by 24.5 total workyears for this program, of which \$1,331,500 will be for the Salaries and Expenses appropriation and \$3,062,000 will be for the Research and Development appropriation. This represents an increase of \$183,100 and \$447,700, respectively, and an increase of 2.0 total workyears. The increase in Salaries and Expenses reflects enhanced support to the in-house research program. The increase in Research and Development and workyears reflects the need for additional support to OSW in making permitting and land banning decisions.

Develop and Evaluate Tests and Procedures for Conducting Risk Assessments. Additional resources will support preparation of additional Health and Environmental Effects Profiles (HEEPs) and Alternate Concentration Levels (ACLs) needed for listing decisions. In addition, many HEEPs need to be updated to reflect new health data developed since the original HEEPs were prepared. Increased resources will also provide additional support for banning and permitting decisions and for responding to public comments on proposed decisions.

Conduct the Assessment and Control Research Necessary to Address Dioxin. Exposure and risk assessment methods for dioxin and similar compounds will be advanced through use of new scientific information. Specific efforts will include refining exposure methods to account for atmospheric photolysis rates and their effects on soil concentrations and determining soil accumulation on skin and subsequent dermal absorption.

Develop Procedures to Prevent and Contain Hazardous Releases. Chemical-specific risk assessments will continue being developed to support the Underground Storage Tank (UST) program.

### 1986 Program

In 1986, the Agency is allocating a total of \$3,762,700 supported by 22.5 total workyears for this program, of which \$1,148,400 is from the Salaries and Expenses appropriation and \$2,614,300 is from the Research and Development appropriation. In 1986, the program emphasizes risk assessment studies to support permitting and land banning decisions by OSW.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$3,297,000 supported by 23.6 total workyears for this program, of which \$1,107,800 was from the Salaries and Expenses appropriation and \$2,189,200 was from the Research and Development appropriation. During 1985, HEEPs were initiated for approximately 94 chemicals, Acceptable Daily Intake (ADI) verification and development were initiated for approximately 400 chemicals, and the risk analysis for dioxin-contaminated soil was completed and a final report sent to OSW.

## MONITORING SYSTEMS AND QUALITY ASSURANCE

### 1987 Program Request

The Agency requests a total of \$14,838,800 supported by 48.5 total workyears for this program, of which \$3,635,800 will be for the Salaries and Expenses appropriation and \$11,203,000 will be for the Research and Development appropriation. This represents a decrease of \$25,300 and an increase of \$1,000, respectively, and an increase of 1.0 total workyear. The overall decrease is the result of new emphasis being placed on generic approaches to validating analytical methods, rather than the method-by-method approach emphasized formerly.

Conduct the Assessment and Control Research Necessary to Address Dioxin. Guidelines for trace analysis of additional non-2,3,7,8-TCDD dioxins and dibenzofurans will be developed. Following standardization and validation, these will be published and incorporated into contract laboratories' protocols for analysis of dioxin-contaminated samples.

Develop Procedures to Identify and Measure Chemicals in Wastes. Two new activities will be initiated: standardization of subsurface monitoring methods for more reliable ground water monitoring, and development of generic analytical methods for publication by OSW. Research in previously initiated areas will continue and include validation of existing analytical methods, development of new analytical methods and development and validation of subsurface monitoring methods.

Provide Quality Assurance Support to the Hazardous Waste Program. Quality assurance support to the contract labs program will continue to be provided, as will referee laboratory services. Standard reference materials will be developed for use in the materials repository, and quality control and performance evaluation samples will be distributed to contract laboratories.

Develop Procedures to Prevent and Contain Hazardous Releases. Development of a real-time sensor for gaseous emissions will be initiated. This will detect potential releases such as the one that occurred in Bhopal, India. UST support will encompass evaluation of geophysical sensors and volatile organic emission sensors for detecting leaks of materials such as gasoline and benzene.

### 1986 Program

In 1986, the Agency is allocating a total of \$14,863,100 supported by 47.5 total workyears for this program, of which \$3,661,100 is from the Salaries and Expenses appropriation and \$11,202,000 is from the Research and Development appropriation. Resources in 1986 are supporting development of new field monitoring methods for use at disposal sites, validation of additional analytical methods and detection and monitoring of leaking underground storage tanks.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$10,833,600 supported by 40.2 workyears for this program, of which \$4,127,600 was from the Salaries and Expenses appropriation and \$6,706,000 was from the Research and Development appropriation. During 1985, four analytical methods were validated, ground water monitoring with fiber optics was initially evaluated and extensive quality assurance support was provided.

## HEALTH EFFECTS

### 1987 Program Request

The Agency requests a total of \$2,408,100 supported by 12.0 total workyears for this program, of which \$652,100 will be for the Salaries and Expenses appropriation and \$1,756,000 will be for the Research and Development appropriation. This represents a decrease of \$198,900 and an increase of \$672,600, respectively, and no change in total workyears. The decrease in Salaries and Expenses and increase in Research and Development reflect the fact that validation of the bioassay screen will be conducted extramurally.

Develop and Evaluate Procedures for Conducting Risk Assessments. Development of the bioassay screening protocol for determining waste toxicity will continue. Additional resources will support accelerated validation of the screen's ability to accurately represent human health endpoints.

Conduct the Assessment and Control Research Necessary to Address Dioxin. Additional resources will support initiation of a program to determine the toxicity of dioxins and similar compounds.

### 1986 Program

In 1986, the Agency is allocating a total of \$1,934,400 supported by 12.0 total workyears for this program, of which \$851,000 is from the Salaries and Expenses appropriation and \$1,083,400 is from the Research and Development appropriation. In 1986 this activity involves accelerated efforts to validate the bioassay screening protocol.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,776,900 supported by 6.9 workyears for this program, of which \$781,300 was from the Salaries and Expenses appropriation and \$995,600 was from the Research and Development appropriation. Development of individual biological health effects tests of wastes for four disease endpoints was completed in 1985. These endpoints are general toxicity, genetic toxicity, reproduction toxicity and nervous system toxicity.

## ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

### 1987 Program Request

The Agency requests a total of \$19,237,100 supported by 99.9 total workyears for this program, of which \$5,429,100 will be for the Salaries and Expenses appropriation and \$13,808,000 will be for the Research and Development appropriation. This represents an increase of \$546,400 and a decrease of \$1,142,500, respectively, and no change in total workyears. The increase in Salaries and Expenses reflects enhanced support to the in-house research program. The decrease in Research and Development reflects completion of several activities supporting OSW's dioxin, land disposal and incineration programs.

Develop Data to Support the Use of Alternative Technologies. This program will continue evaluating both new and existing alternative treatment processes for wastes likely to be banned from land disposal. Additional resources will accelerate the availability of case study results to support the Agency's land banning program.

Conduct the Assessment and Control Research Necessary to Address Dioxin. Research will continue evaluating the sorption/desorption characteristics of dioxin in contaminated soils. Decreased resources are being sought as a result of completion of initial research efforts and the fact that alternative technology assessments will address many of the technologies initially explored in this program.

Develop Data to Support Implementation of the Land Disposal Regulations. Research in this program will continue addressing the major issues associated with land disposal, including liners and cover performance, leachate collection, emissions and the problems of small generators. Reduced resources are being sought as a result of completion of several research efforts addressing liners and landfill placement.

Develop Data to Support Implementation of the Incineration Regulations. Performance tests will be conducted by incinerating wastes at the Combustion Research Facility to determine the operating conditions necessary for waste destruction. Real-time methods of determining incinerator compliance with permits will be investigated, as will improved sampling techniques for monitoring thermal operations. Reduced resources are being requested as a result of completion of earlier research efforts.

Develop Procedures to Prevent and Contain Hazardous Releases. Additional resources are being requested to support the UST program. Planned activities include evaluations of existing leak detection methods, a guidance manual on the use of non-destructive techniques for locating buried tanks, and a guidance manual on tank release prevention methods. Research supporting the Clean Water Act will produce a manual on procedures for on-site treatment of high-strength wastes, and on evaluation of containment, removal and dispersant technologies for controlling floating spills.

#### 1986 Program

In 1986, the Agency is allocating a total of \$19,833,200 supported by 99.9 total workyears for this program, of which \$4,882,700 is from the Salaries and Expenses appropriation and \$14,950,500 is from the Research and Development appropriation. Activities in 1986 include several studies on landfill liners and covers and new evaluations of leak detection equipment in support of the UST program.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$21,453,900 supported by 101.4 total workyears for this program, of which \$5,353,000 was from the Salaries and Expenses appropriation and \$16,100,900 was from the Research and Development appropriation. During 1985, the performance of eight full scale incinerators was evaluated and reported on, as was the use of innovative extraction methods for removing heavy metals from wastes. Dioxin emissions from industrial boilers were reported on, as were various designs for controlling waste lagoon leakage. Major evaluations were conducted regarding control technologies for dioxin-contaminated wastes and soils.

#### ENVIRONMENTAL PROCESSES AND EFFECTS

##### 1987 Program Request

The Agency requests a total of \$9,697,500 supported by 58.1 total workyears for this program, of which \$3,157,500 will be for the Salaries and Expenses appropriation and \$6,540,000 will be for the Research and Development appropriation. This represents increases of \$38,900 and \$611,000, respectively. The increase in Salaries and Expenses reflects adjustments to the 1986 base as part of government-wide deficit reductions. The increase in Research and Development reflects the need for accelerated model validation research to support the land banning program.

Develop and Evaluate Procedures for Conducting Risk Assessments. Additional resources will accelerate development of multimedia assessment models for predicting potential migration of wastes from land disposal sites into air, soil and ground water, and will allow additional validation of ground water models for predicting the impacts of land disposal. Quantitative structure-activity research will also continue developing a validated method for predicting the toxicity of wastes and leachates.

Conduct the Assessment and Control Research Necessary to Address Dioxin. The transport, fate and degradation of 2,3,7,8 and other isomers will continue being assessed, as will dioxin's bioavailability to fish from contaminated sediments. Comparative plant uptake rates will also be determined.

Develop Data to Support Implementation of the Land Disposal Regulations. Evaluations of the land treatability of wastes and of specific soil processes will continue. A field-scale evaluation of waste treatability will be conducted to assess the utility of land treatment as a disposal option and a users guide for making land treatment decisions will be produced.

Develop Procedures to Prevent and Contain Hazardous Releases. Development of a ground water transport and fate model for predicting concentrations of materials, including gasoline in ground water, will be accelerated with additional resources. A validated bioassessment protocol for determining the bioavailability and toxicity of releases will also be developed.

#### 1986 Program

In 1986, the Agency is allocating a total of \$9,047,600 supported by 58.1 total workyears for this program, of which \$3,118,600 is from the Salaries and Expenses appropriation and \$5,929,000 is from the Research and Development appropriation. In 1986 the program includes accelerated model validation efforts needed to support the land banning program.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$8,086,100 supported by 57.4 work-years for this program, of which \$3,513,200 was from the Salaries and Expenses appropriation and \$4,572,900 was from the Research and Development appropriation. During 1985, a report was issued on field verification of the use of microcosms, as was a report on the mobility of 2,3,7,8-TCDD in soils.

### INTEGRATED HAZARDOUS WASTE RESEARCH

#### 1987 Program Request

The Agency requests no resources for this activity in 1987.

#### 1986 Program

In 1986, the Agency is allocating a total of \$2,392,500 supported by no work-years for this program, all of which is from the Research and Development appropriation. The Agency is currently working with Tufts University on development of a comprehensive research program to address a wide variety of research as well as public policy issues. This research program is intended to address such issues as alternative technologies applications, land disposal practices, common public perceptions associated with disposal facilities and development of programs for public education.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,105,800 for this program from the Research and Development appropriation. These resources were used to establish and staff a Center for Environmental Management; develop a comprehensive plan addressing research, policy and education needs in the hazardous waste area; and initiate six health research projects, three policy projects, and two technology projects.





# **Abatement and Control**



ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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## HAZARDOUS WASTE

## Waste Management Regulations, Guidelines &amp; Policies

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
----- (DOLLARS IN THOUSANDS) -----							
PROGRAM -----							
Regulations, Guidelines & Policies-Hazardous Waste							
Salaries & Expenses	\$12,617.9	\$15,954.5	\$16,492.3	-\$709.2	\$15,783.1	\$18,791.1	\$3,008.0
Abatement Control and Compliance	\$45,777.1	\$54,191.0	\$54,491.0	-\$2,342.8	\$52,148.2	\$56,691.0	\$4,542.8
TOTAL	\$58,395.0	\$70,145.5	\$70,983.3	-\$3,052.0	\$67,931.3	\$75,482.1	\$7,550.8
RCRA Regulatory Program - Office of Air and Radiation							
Salaries & Expenses	\$245.5	\$357.7	\$736.7	-\$31.6	\$705.1	\$575.7	-\$129.4
Abatement Control and Compliance	\$1,664.5	\$2,765.0	\$2,765.0	-\$118.9	\$2,646.1	\$3,265.0	\$618.9
TOTAL	\$1,910.0	\$3,122.7	\$3,501.7	-\$150.5	\$3,351.2	\$3,840.7	\$489.5
RCRA Regulatory Program - Office of Water							
Salaries & Expenses	\$57.0	\$604.4	\$869.1	-\$37.4	\$831.7	\$2,633.8	\$1,802.1
Abatement Control and Compliance	\$1,000.0	\$5,100.0	\$5,100.0	-\$219.3	\$4,880.7	\$6,000.0	\$1,119.3
TOTAL	\$1,057.0	\$5,704.4	\$5,969.1	-\$256.7	\$5,712.4	\$8,633.8	\$2,921.4
TOTAL:							
Salaries & Expenses	\$12,920.4	\$16,916.6	\$18,098.1	-\$778.2	\$17,319.9	\$22,000.6	\$4,680.7
Abatement Control and Compliance	\$48,441.6	\$62,056.0	\$62,356.0	-\$2,681.0	\$59,675.0	\$65,956.0	\$6,281.0
Waste Management Regulations, Guidelines & Policies	TOTAL \$61,362.0	\$78,972.6	\$80,454.1	-\$3,459.2	\$76,994.9	\$87,956.6	\$10,961.7

## HAZARDOUS WASTE

## Waste Management Regulations, Guidelines &amp; Policies

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
PERMANENT WORKYEARS							
-----							
Regulations, Guidelines & Policies-Hazardous Waste	234.2	270.4	284.4		284.4	279.2	-5.2
RCRA Regulatory Program - Office of Air and Radiation	5.6	8.0	19.0		19.0	13.0	-6.0
RCRA Regulatory Program - Office of Water	1.4	11.9	16.9		16.9	60.0	43.1
TOTAL PERMANENT WORKYEARS	241.2	290.3	320.3		320.3	352.2	31.9
TOTAL WORKYEARS							
-----							
Regulations, Guidelines & Policies-Hazardous Waste	263.3	303.5	317.5		317.5	313.5	-4.0
RCRA Regulatory Program - Office of Air and Radiation	5.6	8.0	19.0		19.0	13.0	-6.0
RCRA Regulatory Program - Office of Water	1.4	11.9	16.9		16.9	62.9	46.0
TOTAL WORKYEARS	270.3	323.4	353.4		353.4	389.4	36.0

## HAZARDOUS WASTE

### Waste Management Regulations, Guidelines, and Policies

#### Budget Request

The Agency requests a total of \$87,956,600 supported by 389.4 total workyears for 1987, an increase of \$10,961,700 and 36 total workyears over 1986. Of the request, \$22,000,600 will be for the Salaries and Expenses appropriation and \$65,956,000 will be for the Abatement, Control and Compliance appropriation, increases of \$4,680,700 and \$6,281,000 respectively.

#### Program Description

The program areas under this subactivity include:

Regulations, Guidelines, and Policies - Hazardous Waste -- This Headquarters program provides national management for the hazardous waste management program under the Resource Conservation and Recovery Act (RCRA), including the Hazardous and Solid Waste Amendments (HSWA) of 1984. Activities include promulgating and refining regulations for the identification, tracking, management, and disposal of hazardous wastes; providing national oversight and guidance for implementing consistent State and Regional hazardous waste permitting programs; providing guidance and technical assistance for implementing an effective national compliance monitoring and enforcement program; promulgating technical performance standards for underground storage tanks; conducting technical studies, regulatory impact analyses, and economic analyses; and assessing control options and technologies necessary for regulatory decision-making.

RCRA Regulatory Program - Office of Air and Radiation -- This program provides support for the development of air emission standards required by the 1984 Amendments for area sources at hazardous waste treatment, storage, and disposal facilities (TSDFs). This program assesses the nature and quantities of emissions at TSDFs, develops emission modeling and testing methods, assesses public health risks, and evaluates emission control techniques from which cost-effective regulations and standards can be promulgated.

RCRA Regulatory Program - Office of Water -- This program provides support for implementation of the 1984 Amendment requirements which impact water quality and drinking water programs. The Office of Water has lead responsibility for review of disposal of hazardous waste into injection wells; a study, regulation revisions, and corrective action requirements to address hazardous wastes in publicly owned treatment works; a study of the impact on groundwater from wastewater treatment lagoons; and rules and waivers for retrofitting surface impoundments.

#### REGULATIONS, GUIDELINES, AND POLICIES - HAZARDOUS WASTE

##### 1987 Program Request

The Agency requests a total of \$75,482,100 supported by 313.5 total workyears for this program, of which \$18,791,100 will be for the Salaries and Expenses appropriation and \$56,691,000 will be for the Abatement, Control, and Compliance appropriation. This represents increases of \$3,008,000 and \$4,542,800 respectively and a decrease of 4.0 total workyears. These levels support the Agency's efforts to provide technical enforcement expertise; to develop regulations, standards, and guidance in the underground storage tank program; and to resolve major issues by a greater reliance on site-specific risk-based decision making.

Regulatory Development, Revisions, and Analyses -- The Agency will accelerate its efforts to implement the activities initiated in 1985 and 1986 to manage hazardous waste. The Agency will use case-specific risk-based decision making, early public participation in rulemakings, and cross program/cross media coordination to improve the existing regulatory framework and to develop regulations based on requirements of the 1984 Amendments.

The Agency will place major emphasis on decisions to restrict the land disposal of certain hazardous wastes to protect ground water and air. The Agency will revise as appropriate the proposed waste banning decision framework and will reach decisions on dioxins, solvents and the California list wastes; promulgate alternate treatment standards for restricted wastes; and develop regulations for the petition process for land ban variances. Data development to support extensive waste characterization and capacity studies will be undertaken.

Another rulemaking priority will be the development of standards for new and existing underground storage tanks which contain petroleum products and hazardous substances. These standards will include performance standards for new tanks; standards for leak detection; regulations for reporting releases and corrective action requirements.

The Agency will promulgate and refine regulations to identify hazardous wastes and to provide major changes in their management and disposal. Currently scheduled waste listings (including PCBs) will be completed, an organic toxicity characteristic will be promulgated, and decisions will be reached on the additional delisting petitions generated by the land disposal restrictions. To ensure a consistent strategy for ground water protection, the Agency will promulgate standards for liners, leachate collection systems, and leak detection systems for the storage, treatment, or disposal of hazardous waste in landfills and surface impoundments. The Agency will provide technical guidance for retrofitting surface impoundments and review variance applications. The Agency will revise regulations on ground water monitoring methods and statistics to facilitate implementation.

The Agency will continue to close gaps in the regulatory framework. The Agency will promulgate regulations requiring that land disposal facilities provide assurance that sufficient funds are available for corrective action. The Agency will continue to prepare a Report to Congress on the need for Subtitle D criteria revisions and initiate any necessary revisions; continue the mining waste, utilities, and oil and gas studies; and provide Reports to Congress on Small Quantity Generators (SQGs). The Agency will promulgate administrative and technical standards for waste burned as fuel and will deliver a Report to Congress on dioxin emissions.

Program Implementation and Policy Guidance -- Most completed rulemakings will require intensive followup activities, including technical assistance to Regional and State personnel and the public, guidance documents, and technical interpretations of the rulemaking record during litigation. The Agency will prepare policy and technical guidance on corrective action, SQGs, waste ban petitions, burning and blending, health assessment provisions, and underground storage tanks. The Agency will continue to send Permit Assistance Teams to the field to assist in permit processing, and will continue the SQG education/assistance program. The Agency will continue to provide technical enforcement case support and technical assistance in compliance monitoring, particularly for work at commercial and Federal facilities.

The Agency will ensure that timely and appropriate enforcement actions are taken, that adequate inspections and reviews are conducted, and that appropriate policy, guidance, and strategies are developed to assist Regions and States in their enforcement programs. Training and enforcement workshops for Regions and States will be continued in areas such as ground water compliance, corrective action, and enforcement of closure plans and permits.

The Agency will provide oversight and assistance to States in implementing the Underground Storage Tanks program. This assistance will include review of State regulatory development and preparation of State authorization approval packages along with policies and guidances.

#### 1986 Program

In 1986, the Agency is allocating a total of \$67,931,300 supported by 317.5 total workyears for this program, of which \$15,783,100 is from the Salaries and Expenses appropriation and \$52,148,200 is from the Abatement, Control, and Compliance appropriation.

Regulatory Development, Revision, and Analyses -- The Agency is continuing to respond to the expanded and accelerated schedule mandated by the 1984 Amendments. The Agency is proposing the decision framework for banning wastes from land disposal, evaluating alternative treatment capacity studies, proposing waste oil regulations and waste as fuel technical standards, promulgating regulations for SQGs and conducting a public education program for the expanded regulated community, and closing gaps in the regulatory structure by continuing to propose and promulgate hazardous waste listings and delistings, proposing an organic toxicity characteristic, promulgating final hazardous waste tank standards, and modifying financial assurance regulations. Underground storage tank regulations will be proposed, including tank standards, standards for leak detection, regulations for reporting releases, and corrective action requirements.

The Agency is proposing regulatory revisions to Appendix VIII ground water monitoring and alternative concentration levels and proposing regulations for liner and leak detection and disposal of liquids in landfills. The Agency is promulgating the codification rule and the State authorization rule.

The Agency is producing a mining report and a utility report to Congress, a mining waste exclusion reinterpretation, and is proposing or promulgating four procurement guidelines.

Program Implementation and Policy Guidance -- The Agency is developing implementation plans for all regulations to ensure integrated cross media/cross program coordination and to expedite guidance development and permit issuance. The Agency is developing guidances for effective and consistent ground water protection to include land disposal ban petition review, location criteria, retrofitting and liner construction, ground water monitoring parameters, managing liquids in landfills, closure and post-closure requirements, and correction of environmental problems from past mismanagement of waste at RCRA facilities.

To ensure a consistent national program, the Agency is conducting annual program implementation reviews. The Agency will continue to provide training and revise guidance manuals and technical resource documents to implement the hazardous waste treatment, storage, and disposal facility permitting standards. The Agency will provide guidance on facility management planning and the Federal facilities inventory.

The Agency is providing technical enforcement case support and compliance monitoring and enforcement guidance documents on ground water, corrective action, closure, and permit enforcement. In addition, compliance monitoring inspection support and guidance is provided.

The Agency is emphasizing the notification program in the underground storage tank program. The States are being supported in the development and implementation of the notification programs.

#### 1985 Accomplishments

In 1985, the Agency obligated \$58,395,000 supported by 263.3 total workyears for this program, of which \$12,617,900 was from the Salaries and Expenses appropriation and \$45,777,100 was from the Abatement, Control, and Compliance appropriation.

Regulatory Development, Revision, and Analyses -- The Agency continued to close gaps in the regulatory program. In conjunction with the proposed SQG regulation, a major public outreach program was initiated. The Agency proposed administrative fuel standards, hazardous waste tanks standards, closure and post-closure regulations, and a storage class permit regulation.

The Agency proposed the land disposal restriction schedule and initiated alternative treatment and capacity studies. In conjunction with land disposal restrictions, the Agency continued to test, document, and propose the listing of wastes from processes within various organic chemical industries and promulgated the dioxin listing.



The Agency continued to review and revise existing regulations. The Agency completed the financial assurance analyses, prepared a Report to Congress on the Post Closure Liability Trust Fund, proposed closure/post-closure regulations, revised the definition of solid waste, proposed the solvent mixture rule, continued to study performance and operating criteria for Subtitle D facilities, and submitted a Subtitle D Funding Report.

The Agency proposed and finalized the regulation on notification by underground storage tank owners.

Program Implementation and Policy Guidance -- The Agency issued rules which codified in regulation those HSWA requirements which had immediate short-term effects on the regulated community and provided procedural and interpretive guidances on those regulations. In addition, the Agency assisted the Regions and States in understanding the effect that HSWA will have on State hazardous waste management programs and developed program guidance in such areas as corrective action, exposure assessment, and research and development permits. The Agency provided support and training for Regional and State permit writers, inspectors, and compliance staff. The Agency provided guidance in implementing a Facility Management Strategy to integrate permit and enforcement authorities.

The Agency provided technical expertise to Regions and States for siting assistance, case development, corrective actions, and problem solving for permit/compliance/enforcement actions. The Enforcement Response Policy and the RCRA Ground Water Monitoring Compliance Order Guidance were issued.

The Agency developed a common notification form, reporting and information management formats, and a Program Handbook for States to use in implementing their underground storage tank notification programs.

#### RCRA REGULATORY PROGRAM - OFFICE OF AIR AND RADIATION

##### 1987 Program Request

The Agency requests a total of \$3,840,700 supported by 13.0 total workyears for this program, of which \$575,700 will be for the Salaries and Expenses appropriation and \$3,265,000 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of \$129,400 in the Salaries and Expenses appropriation and a decrease of 6.0 total workyears. The Abatement, Control, and Compliance appropriation will be increased by \$618,900. This increase will support an acceleration of TSDF regulatory development.

In 1987, the program will continue the work begun in 1985 to support the proposal of regulations for TSDF area source types. This will include an assessment of the nature and quantities of emissions for TSDFs, development of emission modeling and testing methods, assessment of public health risks, evaluation of emission control techniques and economic analyses. As a result of these efforts, the Agency expects to propose regulations for seven types of area sources: landfills, surface impoundments, land treatment, containers, waste piles, storage tanks, and transfer operations.

##### 1986 Program

In 1986, the Agency is allocating a total of \$3,351,200 supported by 19.0 total workyears for this program, of which \$705,100 is from the Salaries and Expenses appropriation and \$2,646,100 is from the Abatement, Control and Compliance appropriation.

In 1986, efforts are continuing on the development of air emission regulations for TSDF area sources. Work in process includes the development of the required

information and data, as well as technical and economic analyses for the regulation of these sources.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,910,000 supported by 5.6 total workyears for this program. Of the amount obligated, \$245,500 was from the Salaries and Expenses appropriations and \$1,664,500 was contract work from the Abatement, Control and Compliance appropriation. The contract resources were used to continue standards development work for TSDf sources.

In 1985, efforts continued on the development of air emission regulations for TSDf area sources.

#### RCRA REGULATORY PROGRAM - OFFICE OF WATER

##### 1987 Program Request

The Agency requests a total of \$8,633,800 supported by 62.9 total workyears for this program, of which \$2,633,800 is for the Salaries and Expenses appropriation and \$6,000,000 is for the Abatement, Control and Compliance appropriation. This represents an increase of \$1,802,100 and \$1,119,300, respectively, and an increase of 46.0 workyears.

The 1987 program includes resources for the new effort in the EPA Regions and Headquarters to implement the corrective action requirement for publicly owned treatment works (POTWs) that accept hazardous waste. In addition, it will provide new resources to the Regions to review applications received from NPDES facilities with surface impoundments for exemption from the new RCRA technology requirements under Section 3005(j) of the 1984 amendments. Finally, the increase provides for an acceleration of regulatory activities to issue the proposed major rule to restrict wastes into Class I Underground Injection Control (UIC) wells by August, 1987.

In 1987 various studies will be performed under contract to address problems identified in the domestic sewage study concerning hazardous waste coming into POTWs, to provide technical backup to the review of double liner exemption applications, to develop technical guidance to implement corrective action for POTWs, and to complete the various technical studies in support of the major rule to restrict hazardous wastes to deep injection wells (designated in Class I by the UIC program).

Section 3018(a) of the 1984 RCRA amendments requires EPA to submit a report to Congress by February, 1986 evaluating the type and volume of hazardous wastes going to POTWs and their fate and effects. Section 3018(b) requires EPA by August 1987 (i.e., within 18 months after the report to Congress) to adopt regulatory changes to assure that hazardous substances passing through POTWs, and other problems identified in the Congressional report, are adequately controlled to protect human health and the environment. In support of these requirements, EPA will strengthen management of hazardous waste going to POTWs through revisions to requirements and procedures under NPDES, general pretreatment, industrial categorical standards, and sludge criteria.

Under Section 3005(j), RCRA interim status surface impoundments must comply with new technology requirements (e.g., double liner), unless EPA grants a waiver for facilities subject to NPDES permit requirements for treatment impoundments meeting certain specified criteria. In 1987, the EPA water program will review exemption applications and, where appropriate, modify existing permits to incorporate changes resulting from the exemption decision.

RCRA facilities receiving a permit after November 8, 1984, will require corrective action for any release of hazardous constituents from a solid waste management unit at the facility. POTWs are RCRA facilities by rule if they receive hazardous waste by truck or rail (under 40 CFR Section 270.60(c)), and must comply with this

new requirement at the time of NPDES permit issuance. It is estimated that 2,000 NPDES municipal permits will be issued before the end of 1987, of which 10-15% (or 275) will be covered by this new requirement. In 1987, EPA will complete preliminary assessments and site investigations and pursue remedial investigations, where warranted.

EPA is also required to determine when injection of hazardous wastes into Class I UIC wells is protective to human health and the environment. A determination is required for each hazardous waste listed in the RCRA regulations (Part 261). Determinations must be made for 21 specific waste streams by August, 1988. All other determinations must be made in two steps by June, 1990. In 1987, EPA will complete all preregulatory technical analyses and propose a decision for the 21 waste streams in August, 1987. A Regulatory Impact Statement (RIA) will also be completed by August, 1987.

EPA is required to submit a report to Congress by November, 1987, on the impacts of municipal wastewater treatment lagoons on groundwater quality. EPA has funded 6,000 lagoons through the construction grants program. In 1987, EPA will complete all technical analyses and the final report for Agency submission.

#### 1986 Program

In 1986, the Agency is allocating a total of \$5,712,400, supported by 16.9 total workyears for this program, of which \$831,700 is from the Salaries and Expenses appropriation and \$4,880,700 is from the Abatement, Control, and Compliance appropriation.

During 1986, the Agency is submitting to Congress the domestic sewage study required under Section 3018(a) and beginning regulatory planning to control hazardous waste problems identified in the report. EPA is also developing policy and technical guidance to implement the double liner exemption provisions and the new corrective action provisions for POTWs. During 1986, EPA is also completing sampling and analysis and other technical data collection in support of the wastewater lagoon study, which is to be completed during 1987.

In addition, the 1984 amendments are likely to reduce the number of land disposal facilities available to receive hazardous waste while at the same time increasing the amount and type of waste subject to management as a hazardous waste. As a result, there will be increased demand for commercial incinerators, including incinerator vessels. EPA is developing an incineration regulation in parallel with the implementation of its ocean incineration research program.

Finally, the Agency is completing most of the preregulatory planning technical studies in 1986 for the rule to restrict hazardous waste from Class I UIC wells. Studies will cover both the engineering factors and waste analyses necessary to develop a decision rule to make waste restriction determinations.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,057,000, supported by 1.4 total workyears, of which \$57,000 was from the Salaries and Expenses appropriation and \$1,000,000 was from the Abatement, Control, and Compliance appropriation.

During 1985, EPA began major new workgroup efforts to implement the RCRA requirements related to domestic sewage, the double liner requirements, and the restriction of hazardous waste to Class I UIC wells. EPA submitted a final report to Congress on May 8, 1985 on Class I UIC wells, as required under Section 701 of the 1984 RCRA amendments.

## HAZARDOUS WASTE

## Financial Assistance

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
Hazardous Waste Management Financial Assistance To States							
Abatement Control and Compliance	\$46,663.2	\$58,000.0	\$58,000.0	-\$2,494.0	\$55,506.0	\$63,000.0	\$7,494.0
TOTAL	\$46,663.2	\$58,000.0	\$58,000.0	-\$2,494.0	\$55,506.0	\$63,000.0	\$7,494.0
Hazardous Waste Management Compliance Grants							
Abatement Control and Compliance	\$5,000.0						
TOTAL	\$5,000.0						
Hazardous Waste Management Initiative Grants							
Abatement Control and Compliance	\$5,048.5		\$4,750.0	-\$204.3	\$4,545.7		-4,545.7
TOTAL	\$5,048.5		\$4,750.0	-\$204.3	\$4,545.7		-4,545.7
Underground Storage Tanks State Grants							
Abatement Control and Compliance		\$7,000.0	\$7,000.0	-\$301.0	\$6,699.0	\$10,000.0	\$3,301.0
TOTAL		\$7,000.0	\$7,000.0	-\$301.0	\$6,699.0	\$10,000.0	\$3,301.0
TOTAL:							
Abatement Control and Compliance	\$56,711.7	\$65,000.0	\$69,750.0	-\$2,999.3	\$66,750.7	\$73,000.0	\$6,249.3
Financial Assistance      TOTAL	\$56,711.7	\$65,000.0	\$69,750.0	-\$2,999.3	\$66,750.7	\$73,000.0	\$6,249.3

## HAZARDOUS WASTE

### Financial Assistance to States

#### Budget Request

The Agency requests a total of \$73,000,000 for 1987, an increase of \$6,249,300 from 1986. All of the request will be for the Abatement, Control, and Compliance appropriation. The two programs with funding requests in 1987, Hazardous Waste Management Financial Assistance to States and Underground Storage Tank State Grants, will remain categorical grants through 1987. However, the Agency plans to include them in the Pollution Control Block Grant starting in 1988.

#### Program Description

The program areas under this subactivity include:

Hazardous Waste Management Financial Assistance to States -- This program provides financial assistance to States for the development, implementation, and enforcement of comprehensive hazardous waste management programs that meet the requirements of Subtitle C of the Resource Conservation and Recovery Act (RCRA). States are required to provide a 25 percent match to these funds. Objectives of the grant program are to provide incentives to the States to 1) develop and administer State hazardous waste management programs controlling the generation, transportation, storage, treatment, and disposal of hazardous wastes; 2) develop environmentally sound permits for as many priority hazardous waste management facilities as possible; and 3) enforce hazardous waste management program regulations to protect human health and the environment.

The Hazardous and Solid Waste Amendments (HSWA) of 1984 have greatly expanded the hazardous waste management programs in the States. HSWA has increased the number and complexity of requirements that States must meet to achieve equivalence with the Federal hazardous waste management program. The 1984 Amendments strengthened requirements for corrective action, broadened restrictions on the land disposal of hazardous waste, and set deadlines for the issuance of RCRA permits.

Hazardous Waste Management Compliance Grants -- This program provides financial assistance to State agencies to improve and evaluate environmental compliance through increased enforcement, training, permitting, and technical assistance.

Hazardous Waste Initiative Grants -- This program provides financial assistance to foster State and local hazardous waste management efforts focused on innovative waste management activities, such as waste reduction, waste exchange, siting, use of alternatives to land disposal, and assistance to small quantity generators.

Underground Storage Tank State Grants -- This program supports development and implementation of the State Underground Storage Tank (UST) programs. States will develop specific regulatory standards and the necessary enforcement authorities to ensure compliance to those standards. State grants are to be used for the development and implementation of State underground storage, release, detection, prevention, and corrective action programs.

#### HAZARDOUS WASTE MANAGEMENT FINANCIAL ASSISTANCE TO STATES

#### 1987 Program Request

The Agency requests a total of \$63,000,000 for this program, all of which will be for Abatement, Control, and Compliance appropriation. This represents an increase of \$7,494,000. This increase will support State implementation of the 1984 Amendment provisions, including inspections, enforcement actions, and corrective action measures.

In 1987, the Agency will provide financial assistance to the States to revise State programs to incorporate the requirements of HSWA. The States will develop legislation and regulations consistent with the HSWA requirements, and will develop and submit applications for authorization for HSWA provisions as they become effective. In implementing the joint permitting process with the Regions, the States will issue the portions of the RCRA permit for which they are authorized. The States will participate in implementing the requirements of HSWA for which they are not authorized, particularly corrective action.

The States will implement the National Permits Strategy (NPS), which places high priority on permit applications for land disposal facilities, commercial incinerators, facilities seeking to expand treatment and incineration capacity, and Research, Development and Demonstration (RD&D) permit applications. The States and Regions will jointly use the facility management planning process which identifies environmentally significant facilities and more effectively applies permitting and enforcement authorities on a facility-by-facility basis. The 1984 Amendments mandate that the States and EPA process permit applications for land disposal and incineration facilities within four and five years, respectively. The States will also begin to call in permit applications for burner/blender facilities.

The States, in conjunction with the Regions, will continue to focus on improving compliance with the regulatory requirements at facilities, generators, and transporters. States will perform an estimated 9,100 compliance monitoring inspections. Emphasis at land disposal facilities will be on evaluating the adequacy of ground water monitoring systems and identifying releases. Other storage, treatment and disposal facilities will be inspected at least biennially as required by statute. Inspections of generators and transporters will be conducted to ensure that proper manifesting of hazardous waste is occurring as land disposal of hazardous waste becomes more restrictive and costly. Fuel blenders will be inspected as permit applications for these facilities are called in.

State enforcement programs will continue to take timely and appropriate enforcement actions. States will issue, as necessary, administrative enforcement actions, including warning letters and administrative orders, with civil penalties as appropriate, in response to significant violations. States will pursue civil and criminal judicial actions when appropriate. As with the Regions, significant efforts will be made by the States to bring ground water cases successfully to conclusion. The States will have major involvement in corrective action measures to identify and investigate releases.

#### 1986 Program

The Agency is allocating a total of \$55,506,000 for this program, all of which is from the Abatement, Control, and Compliance appropriation.

The States are continuing to develop hazardous waste management programs equivalent to the Federal program. It is anticipated that all participating States will be authorized for the pre-HSWA program by the end of 1986. The States are developing legislation and regulations consistent with the HSWA requirements and submitting applications for authorization for the various provisions of HSWA as they become effective. The States are processing permits jointly with the Regions for those HSWA provisions for which they are not authorized.

The States are implementing the National Permits Strategy, placing a high priority on permit applications for land disposal facilities, commercial incinerators, facilities seeking to expand treatment and incineration capacity, and RD&D permit applications. The States are developing facility management plans jointly with the Regions for land disposal and other environmentally significant facilities and are reviewing additional exposure assessment information for landfills and surface impoundments. The States are reviewing closure plans for the closing land disposal facilities.

The States are concentrating their compliance monitoring and enforcement efforts on strengthening the enforcement presence in the regulated community. State compliance monitoring and enforcement actions are concentrated on those

facilities which pose the greatest potential for environmental problems, such as land disposal facilities. All land disposal facilities, whether operating or closed, will be inspected. Emphasis is focused on those facilities that did not certify compliance to ground water monitoring requirements as required by the 1984 Amendments. Inspections and appropriate enforcement actions will be taken at those facilities that falsely certified to the 1984 Amendment requirements. The State will ensure that timely and adequate closure plans are received.

States are initiating assessments and investigations of releases at facilities to require corrective action measures be taken by the owner/operator. When violations are detected, States are issuing enforcement actions, including warning letters and administrative orders, as well as taking civil and criminal actions.

#### 1985 Accomplishments

In 1985, the Agency obligated \$46,663,200, all of which was from the Abatement, Control, and Compliance appropriation. These grant funds supported the development and authorization of State hazardous waste management programs, implementation of authorized programs, and the implementation of the Federal program in unauthorized States through Cooperative Arrangements.

The States continued to develop hazardous waste management programs equivalent to the Federal program. By the end of 1985, 26 States had achieved final authorization for the pre-HSWA program. In addition, the States began to develop legislation and regulations consistent with the provisions of HSWA.

The States continued to implement the National Permits Strategy. By the end of 1985, the States and Regions had requested 679 permit applications and had completed 298 final determinations. In addition, the States began the process of developing facility management plans for environmentally significant facilities.

In conjunction with the Regions, States concentrated their inspections and enforcement efforts on strengthening the compliance monitoring presence in the regulated community. The States conducted 14,540 compliance inspections. State compliance monitoring activities focused on ground water monitoring, closure and financial assurance requirements, and proper disposal, storage, labeling, and manifesting of hazardous waste. Where violations were detected, States initiated enforcement actions to bring the facility or handler into compliance.

#### HAZARDOUS WASTE MANAGEMENT COMPLIANCE GRANTS

##### 1987 Program Request

The Agency requests no funds for this program. Resources to support the permitting and enforcement activities of the National Permits Strategy are included in the Hazardous Waste Management Financial Assistance to States program element.

##### 1986 Program

The Agency requested no funds for this program. Resources to support the permitting and enforcement activities of the National Permits Strategy are included in the Hazardous Waste Management Financial Assistance to States program element.

##### 1985 Accomplishments

In 1985, the Agency allocated a total of \$5,000,000 for this program, all of which was from the Abatement, Control, and Compliance appropriation. Funding was provided by a one-time Congressional Add-on. These resources were provided to State agencies to increase permitting and enforcement activities in support of the National Permits Strategy (NPS). States used these funds to demonstrate how to accelerate implementation of the NPS.

## HAZARDOUS WASTE MANAGEMENT INITIATIVE GRANTS

### 1987 Program Request

The Agency requests no funds for this program. Resources to support activities under this program are provided under the Hazardous Waste Management Financial Assistance to States program.

### 1986 Program

In 1986, the Agency is allocating a total of \$4,545,700 for this program, all of which is from the Abatement, Control, and Compliance appropriation. These funds are being awarded to State and local agencies for developing and implementing hazardous waste management efforts focused on innovative waste management activities, and for accelerating permit issuance to new or expanding hazardous waste management facilities which provide alternatives to land disposal.

### 1985 Accomplishments

In 1985, the Agency allocated a total of \$5,048,500 for this program, all of which is from the Abatement, Control, and Compliance appropriation. These funds were awarded to State and local agencies to develop or implement innovative hazardous waste management efforts such as waste reduction, waste exchange, siting, use of alternatives to land disposal, and assistance to small quantity generators.

## UNDERGROUND STORAGE TANK STATE GRANTS

### 1987 Program Request

The Agency requests a total of \$10,000,000 for this program, all of which will be for the Abatement, Control, and Compliance appropriations. This represents an increase of \$3,301,000. This level reflects the increase in State workload necessary to support the implementation and enforcement of Subtitle I provisions of the 1984 RCRA Amendments.

The Agency will provide resources to the States to continue the development and implementation of the State programs. States will develop specific regulatory standards and will apply for Agency approval of the State program. Enforcement efforts will focus on implementation of the interim prohibition requirements, the notification program, and the development of comprehensive compliance and enforcement programs.

### 1986 Program

In 1986, the Agency is allocating a total of \$6,699,000 for this program, all of which is from the Abatement, Control, and Compliance appropriation.

UST grant funds are being used to develop State UST programs. A major activity is the development, printing, distribution, receipt, and processing of UST notification forms. This includes the development of a data management and analysis system for these notifications. States are developing both statutory and regulatory authorities for State UST programs. States are also exploring and developing multi-year funding strategies such as fees to provide State funding mechanisms.

### 1985 Accomplishments

No resources were requested for this program in 1985. The regulatory basis for the program was not in place in 1985. As required by the 1984 Amendments, Governors designated State agencies to manage the UST notification program.



## HAZARDOUS WASTE

## Waste Management Strategies Implementation

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
Hazardous Waste Management Regulatory Strategies Implementation							
Salaries & Expenses	\$16,907.1	\$18,490.1	\$15,385.9	-\$661.6	\$14,724.3	\$14,757.4	\$33.1
Abatement Control and Compliance	\$3,054.9	\$6,986.0	\$3,986.0	-\$171.4	\$3,814.6	\$3,486.0	-\$328.6
TOTAL	\$19,962.0	\$25,476.1	\$19,371.9	-\$833.0	\$18,538.9	\$18,243.4	-\$295.5
TOTAL:							
Salaries & Expenses	\$16,907.1	\$18,490.1	\$15,385.9	-\$661.6	\$14,724.3	\$14,757.4	\$33.1
Abatement Control and Compliance	\$3,054.9	\$6,986.0	\$3,986.0	-\$171.4	\$3,814.6	\$3,486.0	-\$328.6
TOTAL	\$19,962.0	\$25,476.1	\$19,371.9	-\$833.0	\$18,538.9	\$18,243.4	-\$295.5
Waste Management Strategies Implementation							
PERMANENT WORKYEARS							
-----							
Hazardous Waste Management Regulatory Strategies Implementation	408.0	449.5	365.0		365.0	348.0	-17.0
TOTAL PERMANENT WORKYEARS	408.0	449.5	365.0		365.0	348.0	-17.0

# HAZARDOUS WASTE

## Waste Management Strategies Implementation

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
----- (DOLLARS IN THOUSANDS) -----							
TOTAL WORKYEARS							
-----							
Hazardous Waste Management Regulatory Strategies Implementation	456.7	502.7	423.9		423.9	404.7	-19.2
TOTAL WORKYEARS	456.7	502.7	423.9		423.9	404.7	-19.2

## HAZARDOUS WASTE

### Waste Management Strategies Implementation

#### Budget Request

The Agency requests a total of \$18,243,400 supported by 404.7 total workyears for 1987, a decrease of \$295,500 and 19.2 total workyears from 1986. Of the request, \$14,757,400 will be for the Salaries and Expenses appropriation and \$3,486,000 is for the Abatement, Control and Compliance appropriation, an increase of \$33,100 and a decrease of \$328,600 respectively.

#### Program Description

Hazardous Waste Management Regulatory Strategies Implementation -- This program supports Regional implementation of the hazardous waste management program mandated under the Resource Conservation and Recovery Act (RCRA), including the Hazardous and Solid Waste Amendments (HSWA) of 1984. The Regions assist the States in developing hazardous waste management programs equivalent to the Federal program by providing guidance and technical assistance for developing program capabilities and authorization applications, and by jointly processing permit applications until the States are authorized for HSWA. In addition, the Regions oversee State programs to ensure that implementation of RCRA is carried out in a nationally consistent manner and that minimum RCRA standards are followed. This program also supports Regional activities to directly implement the hazardous waste management program in States that are not authorized.

#### HAZARDOUS WASTE MANAGEMENT REGULATORY STRATEGIES IMPLEMENTATION

##### 1987 Program Request

The Agency requests a total of \$18,243,400 supported by 404.7 total workyears for this program, of which \$14,757,400 will be for the Salaries and Expenses appropriation and \$3,486,000 will be for the Abatement, Control, and Compliance appropriation. This represents an increase of \$33,100 and a decrease of \$328,600 respectively and a decrease of 19.2 total workyears. The Salaries and Expenses increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. The reductions reflect the additional number of States expected to receive pre-HSWA authorization in 1986 and the increased capabilities to the States to implement the RCRA permit program. This request supports Regional assistance to the States and development of program capabilities equivalent to the Federal program. In addition, this amount also supports the Agency permitting and closure plan review workload and oversight of the States activities in these areas. The Agency will provide increased attention to those activities that pertain to ground water releases and hydrogeological characterization.

State program development will be a priority in the Regions in 1987. State programs must be revised to incorporate the new requirements of HSWA. The Regions will review and provide technical assistance to the States as they develop legislation and regulations consistent with the provisions of HSWA. The Regions will review authorization applications against equivalence criteria, recommend approval of applications, and negotiate State grants and Cooperative Arrangements. Because States may apply for authorization for each HSWA provision as it becomes effective, there will be an increasing number of applications which the Regions must review and approve.

Throughout 1987, the Regions will jointly process permit applications with the States until the States become authorized for HSWA provisions. The Regions will continue to implement the National Permits Strategy (NPS). The NPS reflects the impact of HSWA by placing a high priority on permit applications for land disposal facilities, commercial incinerators, facilities seeking to expand treatment and incineration capacity, and Research, Development and Demonstration (RD&D) permit applications. The 1984 Amendments mandate that EPA and the States

process permit applications for land disposal and incineration facilities within four and five years, respectively. The Agency will continue to implement a facility management planning process which will identify environmentally significant facilities and more effectively apply permitting and enforcement authorities on a facility-by-facility basis. Permit activity for land disposal and other environmentally significant facilities will increase as corrective actions are addressed and incorporated in permits. This will allow applications to move forward to the draft permit and final determination phases. Burner/blender permit applications will be called-in so that permit processing can begin for these newly-regulated hazardous waste handlers.

An important activity of the Regions will be to provide adequate oversight of State permitting activities. Regions will review State permit actions to ensure technical adequacy, enforceability, and national consistency as well as to provide State permit writers with additional technical assistance. The Agency will provide specific guidance during the review of the more complex regulatory requirements such as corrective action, and closure and post-closure plans. In addition, the Regions will implement the Agency's national oversight policy through evaluations of State performance, including program reviews, file audits, and analysis of routine reports.

The Regions will provide assistance to the States in the development of underground storage tank (UST) programs. The Regions will begin to review and approve state UST program applications and to negotiate and oversee State UST grants.

#### 1986 Program

In 1986, the Agency is allocating a total of \$18,538,900 supported by 423.9 total workyears for this program, of which \$14,724,300 is for the Salaries and Expenses appropriation and \$3,814,600 is for Abatement, Control, and Compliance appropriation.

The Regions are assisting the States in the development of hazardous waste management programs equivalent to the Federal program. HSWA established a January 1986 deadline for States to receive authorization for the pre-HSWA program. The Agency anticipates that all 51 participating States will be fully authorized for the pre-HSWA program by the end of 1986. As States achieve full authorization, the Agency is performing an increasing oversight and technical support function for the pre-HSWA program. In addition, the Regions are reviewing and providing technical assistance to the States as they develop legislation and regulations consistent with the provisions of HSWA.

The Agency and the States are jointly processing permit applications. The Regions are issuing those portions of the RCRA permit that include HSWA provisions for which the States are not authorized. The Regions are implementing the National Permits Strategy. The Regions are developing facility management plans for land disposal and other environmentally significant facilities, and are beginning to review additional exposure assessment information for landfills and surface impoundments. The Regions are also facing a large closure plan review workload in 1986. In addition, the Regions are overseeing State permit actions on facilities to ensure national consistency, providing technical assistance to State permit writers, and conducting State program reviews.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$19,962,000 supported by 456.7 total workyears of which \$16,907,100 was for Salaries and Expenses appropriation and \$3,054,900 was for the Abatement, Control, and Compliance appropriation.

The Regions focused on assisting States to achieve authorization to implement a hazardous waste management program equivalent to the Federal program. By the end of 1985, twenty-six States had achieved full authorization for the pre-HSWA

program. In addition, the States began to develop legislation and regulations consistent with the provisions of HSWA.

The Regions continued to implement the National Permits Strategy. The Regions and States requested 679 permit applications and completed 298 final determinations. In addition, the Regions began the process of developing facility management plans for environmentally significant facilities.



# **Enforcement**





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## HAZARDOUS WASTE

## Hazardous Waste Enforcement

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
Hazardous Waste Enforcement							
Salaries & Expenses	\$7,834.3	\$11,716.3	\$15,556.3	-\$668.9	\$14,887.4	\$15,211.2	\$323.8
Abatement Control and Compliance	\$1,652.3	\$6,250.0	\$9,250.0	-\$397.8	\$8,852.2	\$11,250.0	\$2,397.8
TOTAL	\$9,486.6	\$17,966.3	\$24,806.3	-\$1,066.7	\$23,739.6	\$26,461.2	\$2,721.6
TOTAL:							
Salaries & Expenses	\$7,834.3	\$11,716.3	\$15,556.3	-\$668.9	\$14,887.4	\$15,211.2	\$323.8
Abatement Control and Compliance	\$1,652.3	\$6,250.0	\$9,250.0	-\$397.8	\$8,852.2	\$11,250.0	\$2,397.8
Hazardous Waste Enforcement TOTAL	\$9,486.6	\$17,966.3	\$24,806.3	-\$1,066.7	\$23,739.6	\$26,461.2	\$2,721.6
PERMANENT WORKYEARS							
-----							
Hazardous Waste Enforcement	198.9	280.3	395.1		395.1	392.0	-3.1
TOTAL PERMANENT WORKYEARS	198.9	280.3	395.1		395.1	392.0	-3.1
TOTAL WORKYEARS							
-----							
Hazardous Waste Enforcement	219.7	300.5	425.2		425.2	425.2	
TOTAL WORKYEARS	219.7	300.5	425.2		425.2	425.2	

## HAZARDOUS WASTE

### Hazardous Waste Enforcement

#### Budget Request

The Agency requests a total of \$26,461,200 supported by 425.2 total workyears for 1987, an increase of \$2,721,600. Of the request, \$15,211,200 will be for the Salaries and Expenses appropriation and \$11,250,000 is for the Abatement, Control, and Compliance appropriation, increases of \$323,800 and \$2,397,800 respectively.

#### Program Description

Hazardous Waste Enforcement -- This program serves to ensure national compliance with the Resource Conservation and Recovery Act (RCRA), including the Hazardous and Solid Waste Amendments of 1984 (HSWA). The principal objectives are to inspect and evaluate hazardous waste generator, transporter, and facility compliance with the statutory and regulatory requirements of RCRA; to take appropriate administrative, civil, and criminal enforcement actions, including activities for corrective action; and to assist and evaluate program implementation in the States. This program supports Regional activities to operate and enforce the Federal regulatory program in States which have not received authorization. These activities include compliance monitoring and enforcement actions at interim status facilities, permitted facilities, hazardous waste generators, and at underground storage tanks.

The Agency is also responsible for providing technical assistance and evaluating programs in authorized and Cooperative Arrangement States to assess their progress in conducting hazardous waste compliance monitoring and enforcement activities. The Regional program oversees implementation of RCRA in those States which are authorized. This oversight includes periodic review of States' monitoring and enforcement accomplishments and taking appropriate enforcement actions when States do not act.

#### HAZARDOUS WASTE ENFORCEMENT

##### 1987 Program Request

The Agency requests a total of \$26,461,200 supported by 425.2 total workyears, of which \$15,211,200 will be for the Salaries and Expenses appropriation, and \$11,250,000 will be for the Abatement, Control, and Compliance appropriation. This represents increases of \$323,800 and \$2,397,800, respectively, with no change in total workyears. The increases support additional workload associated with corrective action activities.

Compliance with ground water protection requirements continues as a high RCRA priority. The Agency will conduct compliance evaluation inspections for ground water monitoring at facilities that are operating or are closed. Facilities subject to ground water monitoring requirements will receive a detailed technical evaluation to ensure that the facility hydrogeology is adequately characterized, that monitoring wells have been properly located and installed, that sampling and analysis are conducted adequately, and that expanded monitoring is undertaken to assess detected leakage. The Agency will also increase the level of sampling effort associated with compliance and investigations for releases to ensure that adequate independent sampling is conducted.

The Agency will perform thorough inspections at all Federal, State and local government owned or operated treatment, storage, and disposal facilities (TSDFs). The Agency will conduct inspections at commercial facilities to ensure that these facilities are environmentally acceptable to support off-site management of Superfund wastes. The Regions will conduct inspections and technical evaluations of compliance with closure and post-closure plans, and financial

assurance instruments for hazardous waste facilities in unauthorized States and will provide support for those evaluations in authorized States. This will be a substantial endeavor in view of the large number of land disposal unit closures in 1986.

The Agency will continue its expanded enforcement efforts tied to ground water closures, the more stringent requirements of the 1984 Amendments, and the implementation of the Enforcement Response Policy. Implementation of the RCRA Ground Water Monitoring Technical Enforcement Guidance, along with the Interim National Criteria which provides the basic goals and Region/State performance expectations for the RCRA program, will ultimately lead to significant improvements in the rate of compliance with the RCRA program. To secure improved compliance with RCRA standards, the Regions will take enforcement actions when and where appropriate. Significant efforts will be made to bring existing ground water cases successfully to a conclusion and to oversee implementation of remedies. Enforcement resources will be provided to continue Regional support of the permitting program. In addition to inspections, Regions will support enforcement actions in response to violations occurring during the permit, closure, or post-closure process. The Regions will also continue their support for civil referrals and criminal investigations.

Major efforts will be made to undertake corrective action measures at operating and closed facilities, including identifying and investigating releases at solid waste management units. Where appropriate, the Agency will require corrective action at these facilities through administrative orders, schedules of compliance, or judicial actions.

The Agency will continue State program evaluations and technical support. The Regions will conduct program reviews of the compliance monitoring and enforcement programs, including corrective action, in all participating States. In addition, the Regions will conduct oversight inspections and initiate enforcement actions in States that fail to secure compliance in a timely fashion, or in response to a State request for enforcement assistance. The Regions will continue to promote timely and appropriate enforcement actions by the States and will offer technical assistance, sampling, laboratory analysis, and other technical expertise as needed. Regional oversight and assistance for States' underground storage tank and small quantity generator programs will be supported.

#### 1986 Program

In 1986, the Agency is allocating a total of \$23,739,600 supported by 425.2 total workyears, of which \$14,887,400 is for the Salaries and Expenses appropriation and \$8,852,200 for the Abatement, Control, and Compliance appropriation.

The Agency is significantly expanding the hazardous waste enforcement program to address ground water compliance and to support the implementation of the 1984 Amendments. These Amendments have major workload requirements in the following areas: actions to compel corrective action at facilities where prior releases or off-site contamination have occurred; mandatory annual inspections of Federal, State and local government owned or operated facilities; inspections by EPA (or authorized States) at privately operated TSDFs at least every two years; and compliance with double liner requirements at land disposal units.

The Regions are conducting the annual compliance inspections at Federal, State and local government owned or operated facilities. The Regions and States are conducting inspections every six months at those off-site facilities that receive Superfund wastes to ensure that these facilities are in compliance with RCRA standards and do not pose a human health or environmental threat.

The Regions are increasing their efforts in unauthorized States to focus compliance evaluation inspections on ground water monitoring systems. The Regions continue to assist the States in conducting technical reviews of closure and post-closure plans, and financial assurance instruments for all land disposal facilities.

Where inspections or report reviews reveal violations, the Regions or the States are initiating enforcement actions, including corrective action orders, when appropriate. Inspection and enforcement resources are being provided to continue support of the permit program. The Regions are also assessing financial penalties in conjunction with administrative orders.

As part of the Agency's effort to evaluate State programs, the Regions are conducting oversight inspections with State personnel and are reviewing the compliance monitoring and enforcement programs in all authorized and Cooperative Arrangement States. In addition, the Agency is supporting State enforcement actions by providing technical support, such as expert witnesses, sampling and laboratory analysis, and other technical expertise not generally available in State agencies.

#### 1985 Accomplishments

In 1985, the Agency obligated \$9,486,600 supported by 219.7 total workyears of which \$7,834,300 was for the Salaries and Expenses appropriation and \$1,652,300 was for the Abatement, Control, and Compliance appropriation.

The Agency made progress in providing a visible and effective enforcement presence within the regulated community. The Agency or the States conducted compliance monitoring inspections at nearly all of the designated major handlers which included all land disposal facilities. The Agency conducted over 1500 compliance or oversight inspections of major and non-major handlers and over 850 record reviews of closure plans or financial instruments. To return violators to compliance, the Agency issued warning letters and administrative orders with penalties. Civil referrals and criminal investigations were initiated where stronger enforcement actions were appropriate.

In its State oversight role, the Agency conducted oversight inspections to evaluate the quality of State facility inspections as well as to train State inspectors. In addition, the Regions provided technical support and assistance to States conducting compliance monitoring and enforcement activities.



# **Pesticides**





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# PESTICIDES

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
-----							
APPROPRIATION							
Salaries & Expenses	\$36,767.3	\$38,105.7	\$37,522.5	-\$1,613.6	\$35,908.9	\$37,766.1	\$1,857.2
Abatement Control and Compliance	\$28,929.6	\$25,453.1	\$25,453.1	-\$1,094.4	\$24,358.7	\$23,953.1	-\$405.6
Research & Development	\$4,824.6	\$6,948.1	\$6,860.9	-\$294.9	\$6,566.0	\$7,713.9	\$1,147.9
TOTAL, Pesticides	\$70,521.5	\$70,506.9	\$69,836.5	-\$3,002.9	\$66,833.6	\$69,433.1	\$2,599.5
PERMANENT WORKYEARS	734.6	735.1	741.2		741.2	734.7	-6.5
TOTAL WORKYEARS	797.5	809.1	807.6		807.6	803.8	-3.8
OUTLAYS	\$61,155.0	\$57,560.2	\$67,142.7	-\$1,947.5	\$65,195.2	\$68,720.5	\$3,525.3
AUTHORIZATION LEVELS	Authorization for the Federal Insecticide, Fungicide, and Rodenticide Act expires September 30, 1986. Reauthorization is pending.						

OVERVIEW AND STRATEGY

As a class, pesticides are among the most beneficial and the most hazardous of substances. The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, and Sections 402, 406, 408, and 409 of the Federal Food, Drug, and Cosmetic Act (FFDCA) give the Environmental Protection Agency authority to regulate the distribution and use of pesticides in the United States. The Agency is thereby charged with a regulatory task of enormous scope and complexity. An estimated 2.7 billion pounds of pesticide active ingredients are used annually in this country, representing over 50,000 products. These products provide benefits to society by substantially contributing to agricultural productivity and controlling human disease vectors such as mosquitoes. At the same time, pesticides are inherently hazardous in that they are specifically formulated to be injurious to living target organisms and are deliberately introduced into the environment for this purpose. The hazards presented by pesticides are thus intrinsic to their use. While many pesticides are available for use only by trained pest control operators and farmers, many others are used by persons who have no special expertise in the use of these products. Furthermore, many pesticides are used on food or animal feed crops so that human dietary exposure cannot be avoided, although it can be controlled by regulatory measures.

Under FIFRA and the FFDCA, the Agency is responsible for ensuring that pesticides perform their intended functions without unreasonable adverse effects on public health and the environment. The 1987 pesticides program strategically builds on accomplishments achieved by EPA in previous years and reflects a continued commitment to fulfill the congressional mandate. Achieving the statutory goal of balancing health and environmental protection with economic stability and growth requires regulatory operations within EPA that are flexible, efficient, and effective. It also requires ongoing, close, and free dialogue with pesticide users, public interest groups, and the regulated industry. In addition, the Agency intends to encourage increased involvement by State and local governments in regulatory matters, especially in connection with local pest control needs and emergencies, the enforcement of regulations, and the education and training of persons such as applicators and farmworkers who are particularly likely to be exposed to pesticides.

The Agency's 1987 pesticide regulation strategy focuses on four broad program areas: 1) registration of new products, 2) review and reregistration of existing products, 3) enforcement of pesticide use rules, and 4) research and development to support and improve EPA's ability to evaluate the risks and benefits of pesticides. A shift in program emphasis from the review of new pesticide products to the reregistration of existing pesticides, begun in 1985, will continue in 1987.

Registration Activities

FIFRA and FFDCA authorize EPA to set the terms and conditions of pesticide registration, marketing, and use. The purpose of Federal registration of pesticides by EPA is to protect public health and the environment from unreasonable risks while allowing users the benefits of needed pesticides. The Registration program focuses on registering new pesticide products on the basis of data reviewed by Agency scientists and amending current registrations to add new uses and/or new formulations. The Agency will continue to give priority to applications for New Chemicals and New Uses.

The Special Registration program will continue to perform an auxiliary function by permitting certain unregistered pesticide uses for experimental purposes and emergency pest situations. It also provides oversight and guidance to State Registration and Experimental Use Permit programs. The Tolerance program establishes safe and enforceable tolerance levels (or in some instances exemptions from

tolerance requirements) for pesticide residues in or on raw agriculture commodities and processed foods. Tolerances (maximum permissible residue levels) are set for both active and inert pesticide ingredients.

The Agency will continue a program of field and laboratory studies on the efficacy of current protective clothing technology as a means of reducing exposure. This activity will build upon previous investigations of protective clothing, develop options for a regulatory strategy, and propose ways to increase the use of protective clothing. This is a critical area since requiring protective clothing is a key strategy in reducing exposure to an acceptable level.

#### Generic Chemical Review and Reregistration

In 1987, the Agency will continue to place emphasis on evaluating the potential hazards posed by existing pesticides. The registrations of the majority of existing pesticide chemicals are supported by data bases which the Agency has found insufficient, by today's standards, to determine unreasonable adverse effects. The Generic Chemical Review program is designed to remedy this problem by reviewing current knowledge about each chemical, requiring that scientific data base supporting registrations be upgraded, and establishing scientifically based regulatory standards for the reregistration of existing products and the registration of future products. Three major activities support this program:

(1) Data Call-In requires registrants to supply data to fill gaps in the current registration data base. It is designed to increase the likelihood that critical data will be available in time for standards development and/or to aid the Agency in identifying pesticides posing potentially unreasonable adverse effects.

(2) Registration Standards are established on the basis of a thorough review of available information on existing pesticides. They explain the Agency's regulatory position on the use of active ingredients common to large numbers of pesticide products. Standards provide the basis for the reregistration of existing products and for the registration of new products containing currently registered active ingredients. Registration Standards will also be developed for some new active ingredients.

(3) Special Review is a formal process by which pesticides suspected of causing unreasonable adverse effects are subjected to intensive risk/benefit analyses and appropriate regulatory action, such as restricting or prohibiting specific uses of a pesticide, is taken.

#### Pesticides Enforcement

Pesticides enforcement and applicator certification and training activities are undertaken primarily by the States and Territories operating under cooperative agreement programs. Participating States and Territories conduct use observations, inspect pesticide-producing establishments, and conduct marketplace surveillance. The States and Territories also operate training and certification programs for applicators of restricted-use pesticides. The Pesticides enforcement grants will be included in a legislative proposal for block grants designed to give States more flexibility and autonomy in administering environmental programs.

#### Research and Development

The Pesticides Research and Development budget request contains increases in several areas. Resources in environmental processes and effects are increased to investigate the hazards associated with genetically engineered pesticides. Research on health effects will be augmented to develop methodologies for exposure estimation and validation of subpart M of the "Part 158" regulatory guidelines, which specify procedures for registering genetically engineered pesticides. Engineering support will also be increased to evaluate the effectiveness of protective apparel. In the

other areas, research will continue to develop health and environmental test methods in support of FIFRA test guidelines and to examine extrapolation, dosimetry, and biological markers. Finally, efforts will be continued in developing environmental risk assessment methods as well as quality assurance, pesticides repository services, and risk and exposure assessments.

# PESTICIDES

<u>Program Activities</u>	<u>Actual 1985</u>	<u>Budget Estimate 1986</u>	<u>Current Estimate 1986</u>	<u>Estimate 1987</u>	<u>Increase (+) Decrease (-) 1987 vs. 1986</u>
<u>Incremental Outputs</u>					
Special Review Decisions ...	11	13	13	13	---
New Chemical and Biochemical/ Microbial Agent Reviews ...	354	330	330	330	---
Old Chemical Reviews .....	4,209	5,200	4,650	4,650	---
Amended Registration Reviews .....	9,749	8,000	10,000	10,000	---
New Use Reviews .....	349	300	300	300	---
Emergency Exemption Reviews .....	242	500	250	250	---
Experimental Use Permit Reviews .....	480	400	400	400	---
24(c) State Registration Reviews .....	764	775	475	475	---
Temporary Tolerance Petition Reviews .....	147	150	150	150	---
Tolerance Petition Reviews .....	596	475	475	475	---
Inert Ingredient Reviews .....	159	60	60	60	---
Producer Establishment Inspections a/.....	2,140	2,400	2,300	2,070	-230
Use/Reentry and Experimental Use Observations a/.....	15,020	21,200	19,000	18,000	-1,000
Marketplace Investigations a/.....	11,083	8,000	6,000	4,000	-2,000
Import Inspections a/.....	605	700	700	630	-70
State Applicator License and Record Inspections .....	12,760	11,100	11,000	10,000	-1,100
State Dealer Record Inspections .....	9,526	9,000	9,000	8,100	-900
Federal Laboratory Inspections .....	86	25	25	25	---
Test Study Audits .....	291	65	95	95	---
Notices of Violation a/ ....	5,566	4,656	5,220	4,635	-585
Administrative Orders a/ ...	571	352	535	475	-60
Civil Litigations a/ .....	---	---	---	---	---
Criminal Litigations a/ ....	186	175	175	155	-20

## Cumulative Outputs

Registration Standard Guidance Packages Established .....	117	140	142	167	+25
CORT Data Call-In b/ Requirements (Chemicals)...	416	---	---	---	---
Review of Incoming Studies on Existing Chemicals .....	439	940	909	1,379	+470

a/ Includes both Federal and State enforcement activities

b/ (Chronic feeding, oncogenicity, reproduction, and teratogenicity) Program  
complete in 1985

# **Research and Development**





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# PESTICIDES

## Pesticides Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
----- (DOLLARS IN THOUSANDS) -----							
PROGRAM -----							
Scientific Assessment - Pesticides							
Salaries & Expenses	\$396.2	\$432.7	\$432.7	-\$18.5	\$414.2	\$403.8	-\$10.4
Research & Development	\$24.0	\$374.7	\$345.3	-\$14.8	\$330.5	\$372.0	\$41.5
TOTAL	\$420.2	\$807.4	\$778.0	-\$33.3	\$744.7	\$775.8	\$31.1
Monitoring Systems & Quality Assurance - Pesticides							
Salaries & Expenses	\$318.1	\$415.2	\$415.2	-\$17.9	\$397.3	\$415.2	\$17.9
Research & Development	\$1,509.4	\$1,223.4	\$1,111.9	-\$47.8	\$1,064.1	\$1,090.9	\$26.8
TOTAL	\$1,827.5	\$1,638.6	\$1,527.1	-\$65.7	\$1,461.4	\$1,506.1	\$44.7
Health Effects - Pesticides							
Salaries & Expenses	\$1,798.4	\$1,860.2	\$1,854.2	-\$79.7	\$1,774.5	\$1,976.0	\$201.5
Research & Development	\$2,309.8	\$2,239.8	\$2,093.7	-\$90.0	\$2,003.7	\$1,998.0	-\$5.7
TOTAL	\$4,108.2	\$4,100.0	\$3,947.9	-\$169.7	\$3,778.2	\$3,974.0	\$195.8
Environmental Engineering And Technology - Pesticides							
Salaries & Expenses	\$31.1	\$61.6	\$55.7	-\$2.3	\$53.4	\$55.7	\$2.3
Research & Development	\$398.2	\$925.0	\$823.9	-\$35.4	\$788.5	\$925.0	\$136.5
TOTAL	\$429.3	\$986.6	\$879.6	-\$37.7	\$841.9	\$980.7	\$138.8
Environmental Processes & Effects - Pesticides							
Salaries & Expenses	\$2,296.3	\$2,719.1	\$2,716.7	-\$116.9	\$2,599.8	\$2,655.3	\$55.5
Research & Development	\$583.2	\$2,185.2	\$2,486.1	-\$106.9	\$2,379.2	\$3,328.0	\$948.8
TOTAL	\$2,879.5	\$4,904.3	\$5,202.8	-\$223.8	\$4,979.0	\$5,983.3	\$1,004.3

# PESTICIDES

## Pesticides Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							

TOTAL:							
Salaries & Expenses	\$4,840.1	\$5,488.8	\$5,474.5	-\$235.3	\$5,239.2	\$5,506.0	\$266.8
Research & Development	\$4,824.6	\$6,948.1	\$6,860.9	-\$294.9	\$6,566.0	\$7,713.9	\$1,147.9
Pesticides Research TOTAL	\$9,664.7	\$12,436.9	\$12,335.4	-\$530.2	\$11,805.2	\$13,219.9	\$1,414.7

## PERMANENT WORKYEARS

Scientific Assessment - Pesticides	7.3	7.7	5.7		5.7	5.7	
Monitoring Systems & Quality Assurance - Pesticides	4.2	6.4	6.4		6.4	6.4	
Health Effects - Pesticides	27.4	29.0	38.2		38.2	32.2	-6.0
Environmental Engineering And Technology - Pesticides	.1						
Environmental Processes & Effects - Pesticides	41.3	42.3	43.0		43.0	46.0	3.0
TOTAL PERMANENT WORKYEARS	80.3	85.4	93.3		93.3	90.3	-3.0

# PESTICIDES

## Pesticides Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
-----							
TOTAL WORKYEARS							
-----							
Scientific Assessment - Pesticides	7.3	7.7	7.7		7.7	7.7	
Monitoring Systems & Quality Assurance - Pesticides	4.5	7.5	7.5		7.5	7.5	
Health Effects - Pesticides	33.2	38.2	38.2		38.2	38.2	
Environmental Engineering And Technology - Pesticides	.6	1.0	1.0		1.0	1.0	
Environmental Processes & Effects - Pesticides	53.4	55.3	55.3		55.3	55.3	
TOTAL WORKYEARS	99.0	109.7	109.7		109.7	109.7	

## PESTICIDES

### Pesticides Research

#### Principal Outputs by Objective

##### 1987 PLANNED OUTPUTS

=====

##### Objective 1: Develop and Validate Test Methods for FIFRA Studies

- o Final Report: Methods to Detect Adverse Effects on Sperm Production and Function (Sci. Assessment)
- o Final Report: Methods Manual for Spawning, Culturing and Testing Antherinid Fishes (Env. Processes)
- o Report describing validated test protocol to detect and characterize neuro-toxicity (Health)

##### Objective 3: Perform Ecological Research Including Transport, Fate and Field Validation

- o Journal Article: Results of Field Testing of Pesticide Root Zone Model (PRZM) and Pesticide Analytical Solution (PESTANS) Leaching Models for Coastal Plain Soils (Env. Processes)

##### Objective 4: Perform Engineering Research in Support of FIFRA

- o Interim Guidance Manual for Selecting Protective Clothing for Agricultural Pesticide Operations (Engineering)

##### Objective 5: Perform Exposure Monitoring Research

- o Final Report on the Pesticide Total Exposure Assessment Methodology (TEAM) Study (Monitoring)

##### Objective 6: Perform Research on Biotechnology and Microbial and Biochemical Pest Control Agents

- o Report on laboratory testing and evaluation of selected MPCAs on non-target (terrestrial) arthropods (Env. Processes)

##### Objective 8: Provide Support Services for FIFRA Studies

- o Annual Report on Data Comparison Program for Pesticides (Monitoring)
- o Revised Manual for Analytical Methods for Tissue and Environmental Samples (Monitoring)

##### 1986 PLANNED OUTPUTS

=====

##### Objective 1: Develop and Validate Test Methods for FIFRA Studies

- o Report on desirable sample sizes for use in soil contamination studies (Sci. Assessment)
- o Report on genetically altered viruses in the environment (Sci. Assessment)
- o Report: Handbook of Acute Toxicity of Chemicals to Estuarine Organisms (Env. Processes)

Objective 2: Perform Health Research on Biological Markers, Dosimetry and Extrapolation

- o Report describing how to use a newly developed technique to evaluate risk of heritable gene mutation (Health)

Objective 3: Perform Ecological Research Including Transport, Fate and Field Validation

- o Dougherty Plain Annual Project Report (Env. Processes)

Objective 5: Perform Exposure Monitoring Research

- o Report on data assessment of the TEAM Field Study (Monitoring)

Objective 6: Perform Research on Biotechnology and Microbial and Biochemical Pest Control Agents

- o Report characterizing cytolytic factors of the microbial and biochemical pest control agents (Health)

Objective 8: Provide Support Services for FIFRA Studies

- o Risk assessments on aldrin, dieldrin, chlordane and heptachlor (Sci. Assessment)
- o Reproductive and developmental toxicity assessment of cadmium (Sci. Assessment)

1985 ACTUAL OUTPUTS

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Objective 1: Develop and Validate Test Methods for FIFRA Studies

- o Report on the effects of endrin on water fowl and upland game birds in grain fields (Env. Processes)
- o Report on biotechnology risk assessment (Sci. Assessment)

Objective 2: Perform Health Research on Biological Markers, Dosimetry and Extrapolation

- o Report on the neurotoxic potential of pesticides: age related effects of pesticides relevant to youth in agriculture (Health)

Objective 3: Perform Ecological Research Including Transport, Fate and Field Validation

- o (Prototype) Manual - Design Requirements for Conducting Field Level Pesticides Run-off Studies (Env. Processes)
- o Report: Factors Affecting Biodegradation of Fenthionin Salt Marsh Environments (Env. Processes)

Objective 4: Perform Engineering Research in Support of FIFRA

- o Proceedings of the Research Workshop on the Treatment/Disposal of Pesticide Wastewater Generated by the Agricultural Application of Pesticides (Engineering)

Objective 5: Perform Exposure Monitoring Research

- o Status report and data assessment of the TEAM Field Study (Monitoring)

Objective 8: Provide Support Services for FIFRA Studies

- o Epidemiology study protocol for creosote (Sci. Assessment)

## PESTICIDES

### Pesticides Research

#### Budget Request

The Agency requests a total of \$13,219,900 supported by 109.7 total workyears for 1987, an increase of \$1,414,700 and no change in total workyears from 1986. Of the request, \$5,506,000 will be for the Salaries and Expenses appropriation and \$7,713,900 will be for the Research and Development appropriation, increases of \$266,800 and \$1,147,900, respectively.

#### Program Description

The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and the Federal Food, Drug and Cosmetics Act (FFDCA) require the regulation of pesticide use to avoid unreasonable adverse effects to public health and to the environment. The research program improves our understanding of how pesticides interact with human activities and the environment, to assure that their use minimizes damage from pests, while maximizing the protection of human food, health and the environment.

Objective 1: Develop and Validate Test Methods for FIFRA Studies. This activity develops and validates environmental and health test methods for use by industry. Research under this objective is needed to develop valid test protocols to meet pesticide registration requirements and enforcement responsibilities under Sections 3 and 26 of FIFRA.

Objective 2: Perform Health Research on Biological Markers, Dosimetry and Extrapolation. This research effort develops methods for extrapolating from high to low doses between mammalian species and to define the relationships between biochemical indicators of exposure to neurotoxins and behavioral dysfunctions.

Objective 3: Perform Ecological Research Including Transport, Fate and Field Validation. This field validation effort quantifies pesticide effects through censusing and field tests to evaluate mortality, reproduction and recovery potential of fishes, invertebrates, birds and other organisms. The field research is supported and enhanced by detailed laboratory studies and analysis.

Objective 4: Perform Engineering Research in Support of FIFRA. This research effort provides information on protective clothing and equipment for pesticide loaders, mixers, and applicators to meet the Office of Pesticide Programs' (OPP) regulatory needs under FIFRA. Classes of pesticides, formulation types and concentration, types of protective clothing and equipment, and test methods are identified, prioritized, and evaluated.

Objective 5: Perform Exposure Monitoring Research. This effort provides monitoring expertise, equipment, and staff for the development of specialized monitoring protocols and methodology for total human exposure monitoring for pesticides as well as the means to characterize sources and routes of exposure for national pesticide monitoring efforts.

Objective 6: Perform Research on Biotechnology and Microbial and Biochemical Pest Control Agents. This effort provides for the evaluation of the effects of microbial and biochemical pest control agents (MBPCAs) and products of biotechnology on humans and the environment. Such methods and data are necessary to support registration activities of OPP.

Objective 7: Perform Studies on Ecotoxicity and Develop Environmental Risk Assessment Protocols. This effort provides the means to determine the risk posed to actual ecosystems by environmental pollutants.

Objective 8: Provide Support Services for FIFRA Activities. These efforts provide support for risk and exposure assessment as well as quality assurance and pesticides repository services.

## SCIENTIFIC ASSESSMENT

### 1987 Program Request

The Agency requests a total of \$775,800 supported by 7.7 total workyears for this program, of which \$403,800 will be for the Salaries and Expenses appropriation and \$372,000 will be for the Research and Development appropriation. This represents a decrease of \$10,400 and an increase of \$41,500, respectively, and no change in total workyears. This reflects a shift of resources to provide for extramurally funded literature searches for developing assessment methods.

Develop and Validate Test Methods for FIFRA Studies. The 1987 scientific assessment program will continue the development of methods to determine reproductive dysfunction as well as pesticide-specific assessment methods for exposure and health risks from cancer and mutagenicity. Further efforts will examine chemical dose rate effects on damage to DNA and mutagenic responses.

Provide Support Services for FIFRA Activities. The scientific assessment program will continue to prepare health risk assessments for cancer, mutagenicity, adverse reproductive/developmental effects and exposure. Additional efforts will also provide for review of and/or consultation on program office assessments.

### 1986 Program

In 1986, the Agency is allocating a total of \$744,700 supported by 7.7 total workyears for this program, of which \$414,200 is from the Salaries and Expenses appropriation and \$330,500 is from the Research and Development appropriation. The 1986 program is continuing the development of exposure risk assessment methods as well as preparation of health risk assessments and review of program office assessments.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$420,200 supported by 7.3 total workyears for this program, of which \$396,200 was from the Salaries and Expenses appropriation and \$24,000 was from the Research and Development appropriation. In 1985, risk assessments were performed for dicofol and metalaxyl. Data evaluation reports were prepared for captan, linuron and lindane. An epidemiology study protocol was developed for creosote.

## MONITORING SYSTEMS AND QUALITY ASSURANCE

### 1987 Program Request

The Agency requests a total of \$1,506,100 supported by 7.5 total workyears for this program, of which \$415,200 will be for the Salaries and Expenses appropriation and \$1,090,900 will be for the Research and Development appropriation. This represents increases of \$17,900 and \$26,800, respectively, and no change in total workyears. These increases reflect adjustments to the 1986 base as part of government-wide deficit reductions.

Perform Exposure Monitoring Research. This research will be designed to develop methods of measurement for pesticides. The methods will be used to provide data on actual human exposure to individual pesticides. The Total Exposure Assessment Methodology (TEAM) approach will support increased reliance upon such personal exposure monitoring.



Provide Support Services for FIFRA Activities. The 1987 monitoring and quality assurance efforts will continue to operate the pesticide and industrial chemical repository of over 1,400 chemicals. The repository annually distributes over 30,000 standard samples to the user community. Quality assurance support will also continue to OPP contract laboratories as well as lab intercomparison studies and distribution of unknown samples to evaluate OPP laboratories.

#### 1986 Program

In 1986, the Agency is allocating a total of \$1,461,400 supported by 7.5 total workyears for this program, of which \$397,300 is from the Salaries and Expenses appropriation and \$1,064,100 is from the Research and Development appropriation. The 1986 program is continuing support for exposure monitoring research, quality assurance and repository services.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,827,500 supported by 4.5 total workyears for this program, of which \$318,100 was from the Salaries and Expenses appropriation and \$1,509,400 was from the Research and Development appropriation. In 1985, an annual report on the data comparison program for pesticides was prepared. Also, a status report was prepared on data assessment of the Total Exposure Assessment Methodology (TEAM) field study.

#### HEALTH EFFECTS

##### 1987 Program Request

The Agency requests a total of \$3,974,000 supported by 38.2 total workyears for this program, of which \$1,976,000 will be for the Salaries and Expenses appropriation and \$1,998,000 will be for the Research and Development appropriation. This represents an increase of \$201,500 and a decrease of \$5,700, respectively, and no change in total workyears. This reflects a shift of resources to provide for procurement of equipment necessary for biotechnology research and test development.

Develop and Validate Test Methods for FIFRA Studies. Health effects efforts will develop and refine bioassays for the detection of adverse developmental and reproductive effects. Also, techniques will be developed, validated, refined and implemented for determining genetic effects caused by human exposure to chemical carcinogens and mutagens. Finally, methods will be developed to define the relationship between biological indicators or neurotoxicity and disease.

Perform Health Research on Biological Markers, Dosimetry and Extrapolation. Health research will focus on the development of animal models for assessing health risks caused by pesticides as well as development of a data management system with the capability to store and analyze research information on genetic and related toxicants. This system will be used in the estimation of hazard to humans from potential carcinogens and mutagens.

Perform Research on Biotechnology and Microbial and Biochemical Pest Control Agents. Health research in this area will provide methods for detecting, identifying and monitoring biological pesticide agents in mammalian cells as a basis for test protocols to support microbial pesticide registration. Efforts will also be undertaken to evaluate subpart M testing guidelines for microbial pest control agents.

### 1986 Program

In 1986, the Agency is allocating a total of \$3,778,200 supported by 38.2 total workyears for this program, of which \$1,774,500 is from the Salaries and Expenses appropriation and \$2,003,700 is from the Research and Development appropriation. The 1986 program continues to provide data on the effects of microbial and biochemical pest control agents, to develop test methods in support of FIFRA test guidelines and to perform research on biological markers extrapolation from high to low doses.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$4,108,200 supported by 33.2 total workyears for this program, of which \$1,798,400 was from the Salaries and Expenses appropriation and \$2,309,800 was from the Research and Development appropriation. In 1985, journal articles were prepared on the neurotoxic potential of pesticides as well as a preliminary screen for skin penetration of 14 pesticides.

## ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

### 1987 Program Request

The Agency requests a total of \$980,700 supported by 1.0 total workyear for this program, of which \$55,700 will be for the Salaries and Expenses appropriation and \$925,000 will be for the Research and Development appropriation. This represents increases of \$2,300 and \$136,500, respectively, and no change in total workyears. These increases reflect the acceleration of efforts to test protective garments worn by pesticide mixers, loaders and applicators.

Perform Engineering Research in Support of FIFRA. This effort will focus on the evaluation of selected protective garments for pesticide applicators and formulators. Expanded research in this area will evaluate the breakthrough time and steady-state permeation rate data on concentrated formulations of highly toxic pesticides. This research will provide engineering information on pesticide protective apparel used in application and formulation.

### 1986 Program

In 1986, the Agency is allocating a total of \$841,900 supported by 1.0 total workyear for this program, of which \$53,400 is from the Salaries and Expenses appropriation and \$788,500 is from the Research and Development appropriation. Engineering research activities in 1986 are continuing to provide information on the effectiveness of protective garments for pesticide mixers, loaders and applicators.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$429,300 supported by 0.6 total workyear for this program, of which \$31,100 was from the Salaries and Expenses appropriation and \$398,200 was from the Research and Development appropriation. In 1985, a report was prepared on the proceedings of the research workshop on the treatment and disposal of pesticide wastewater generated by the agricultural application of pesticides.

## ENVIRONMENTAL PROCESSES AND EFFECTS

### 1987 Program Request

The Agency requests a total of \$5,983,300 supported by 55.3 total workyears for this program, of which \$2,655,300 will be for the Salaries and Expenses appropriation and \$3,328,000 will be for the Research and Development appropriation. This represents increases of \$55,500 and \$948,800, respectively, and no change in total workyears. These increases will provide for new efforts to determine the effects of genetically engineered pesticides, and to evaluate the effects of pesticide use on groundwater.

Develop and Validate Test Methods for FIFRA Studies. Environmental processes and effects efforts will focus on developing and validating bioassays and other methodologies for use as standardized testing protocols and for use in determining the effects of chemical pesticides on marine and freshwater animals. In this area, methods will be devised for culturing and testing marine and freshwater animals; techniques will be studied to determine the effects of sediment-water interactions of high use pesticides; and testing methods and protocols will be provided. This provides testing methods which the Agency can recommend for use by pesticide manufacturers.

Perform Ecological Research Including Transport, Fate and Field Validation. Research in this area will concentrate on the development, refinement and validation of techniques and models to predict pesticide transport, degradation and fate, as well as exposure estimates of pesticides through surface and subsurface matrices. Additionally, field and laboratory studies will be conducted to determine if laboratory methodologies and results are valid and reflect environmental responses under natural conditions. New efforts will determine the environmental impact to groundwater caused by pesticide use and other agricultural practices. Pesticide processes in soils and ground water will be characterized, information will be developed on spatial variability in subsurface cores, and a report will be produced on best management practices that could mitigate groundwater contamination by pesticides.

Perform Research on Biotechnology and Microbial and Biochemical Pest Control Agents. Environmental processes and effects research will focus on developing and improving testing protocols for unaltered Microbial Pest Control Agents (MPCAs) and genetically altered Biological Control Agents (BCAs) on non-target receptors. Studies will be initiated to field verify initial results and to ensure reproducible predictions. Research results will supply testing protocols for subpart M guidelines used by industry to provide data on which regulatory actions are based.

Perform Studies on Ecotoxicity and Develop Environmental Risk Assessment Protocols. Research in this area will continue to develop methodologies to predict risk to ecosystems. Activities include development of risk assessment methodology for pesticides by combining exposure and hazard data via transport, fate and effects models, determination of validity of model results in expressing estimates of risk of important populations, determination of important endpoint responses and population changes and identification of how ecosystem structure and function alterations affect risk analysis. Other critical activities will include determining the impact of pesticide use on beneficial organisms and preparation of habitat maps of endangered species and associated pesticide hazards. Such assessments are used in determining if a pesticide should be registered, how it should be used, and what its potential risks are.

### 1986 Program

In 1986, the Agency is allocating a total of \$4,979,000 supported by 55.3 total workyears for this program, of which \$2,599,800 is from the Salaries and Expenses appropriation and \$2,379,200 is from the Research and Development appropriation. The 1986 program continues to develop test methods in support of FIFRA guidelines, perform research on transport, fate and field validation, and determine the effects of biological pest control agents. New efforts are being initiated to determine risk to actual ecosystems from pesticides.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,879,500 supported by 53.4 total workyears for this program, of which \$2,296,300 was from the Salaries and Expenses appropriation and \$583,200 was from the Research and Development appropriation. In 1985, reports were completed on the effects of endrin on water fowl and upland game birds as well as on factors affecting biodegradation of fentheon in salt marsh environments. Field level pesticide studies were also conducted.

# **Abatement and Control**



ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# PESTICIDES

## Registration, Special Registration & Tolerances

		ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
----- (DOLLARS IN THOUSANDS) -----								
PROGRAM -----								
Registration								
Salaries & Expenses		\$10,129.4	\$10,377.7	\$10,042.2	-\$431.9	\$9,610.3	\$10,310.4	\$700.1
Abatement Control and Compliance		\$4,665.4	\$3,600.0	\$3,600.0	-\$154.8	\$3,445.2	\$3,200.0	-\$245.2
TOTAL		\$14,794.8	\$13,977.7	\$13,642.2	-\$586.7	\$13,055.5	\$13,510.4	\$454.9
Special Registration								
Salaries & Expenses		\$2,087.1	\$2,042.4	\$1,566.6	-\$67.4	\$1,499.2	\$1,487.7	-\$11.5
TOTAL		\$2,087.1	\$2,042.4	\$1,566.6	-\$67.4	\$1,499.2	\$1,487.7	-\$11.5
Tolerances								
Salaries & Expenses		\$3,131.4	\$2,955.1	\$2,905.1	-\$125.0	\$2,780.1	\$2,902.2	\$122.1
TOTAL		\$3,131.4	\$2,955.1	\$2,905.1	-\$125.0	\$2,780.1	\$2,902.2	\$122.1
TOTAL:								
Salaries & Expenses		\$15,347.9	\$15,375.2	\$14,513.9	-\$624.3	\$13,889.6	\$14,700.3	\$810.7
Abatement Control and Compliance		\$4,665.4	\$3,600.0	\$3,600.0	-\$154.8	\$3,445.2	\$3,200.0	-\$245.2
Registration, Special Registration & Tolerances	TOTAL	\$20,013.3	\$18,975.2	\$18,113.9	-\$779.1	\$17,334.8	\$17,900.3	\$565.5
PERMANENT WORKYEARS -----								
Registration		206.2	196.2	191.5		191.5	191.5	
Special Registration		43.1	39.4	29.7		29.7	27.8	-1.9
Tolerances		75.2	68.7	68.7		68.7	68.1	-.6
TOTAL PERMANENT WORKYEARS		324.5	304.3	289.9		289.9	287.4	-2.5



# PESTICIDES

## Registration, Special Registration & Tolerances

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
----- (DOLLARS IN THOUSANDS) -----							
TOTAL WORKYEARS							
-----							
Registration	217.9	212.3	207.3		207.3	207.3	
Special Registration	45.0	42.3	31.9		31.9	29.9	-2.0
Tolerances	78.5	73.8	73.8		73.8	73.1	-.7
TOTAL WORKYEARS	341.4	328.4	313.0		313.0	310.3	-2.7

## PESTICIDES

### Registration, Special Registration, and Tolerances

#### Budget Request

The Agency requests a total of \$17,900,300 supported by 310.3 total workyears for 1987, an increase of \$565,500 and a decrease of 2.7 total workyears from 1986. Of the request, \$14,700,300 will be for the Salaries and Expenses appropriation and \$3,200,000 will be for the Abatement, Control and Compliance appropriation, an increase of \$810,700 and a decrease of \$245,200, respectively.

#### Program Description

The Agency evaluates all proposed pesticides under a "no unreasonable adverse effects" standard; taking into account the economic, social, and environmental risks and benefits of the use of any pesticide. The overall goal of these activities is to facilitate a steady flow of environmentally acceptable products to the marketplace. These activities are authorized by the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), which requires that a pesticide be registered by EPA before it can be legally sold, distributed, or made available for use, and the Federal, Food, Drug and Cosmetic Act (FFDCA), which requires the establishment of safe pesticide residue levels on food and feed. This subactivity includes three program areas:

Registration -- Under this program new pesticide products are registered and current registrations are amended to add uses and/or new formulations. Registration is accomplished by: 1) reviewing formulation and use data to ensure that product use will not result in "unreasonable adverse effects"; and 2) limiting the risks associated with use through label precautions, special packaging requirements, application directions, and, where necessary, restriction of use to trained applicators.

Special Registration -- The purpose of this program is to respond to requests for experimental use permits and emergency exemptions (permitting the use of unregistered pesticides or the use of registered pesticides for sites/pests not included in their registration to meet pest emergencies). The program also reviews State registrations of pesticides for Special Local Needs and related State plans. These functions are required by Sections 5, 18, and 24 of FIFRA.

Tolerances -- The goal of this program is to protect the public health while giving appropriate consideration to the production of an adequate, wholesome, and economical food supply. This goal is achieved by establishing tolerance levels for residues of both active and inert pesticide ingredients (or exemption from the requirements of a tolerance) in or on raw agriculture commodities and processed foods, establishing safe residue levels (temporary tolerances) for food or feed crops to be marketed following the application of experimental use pesticides, and ensuring, through the testing of analytical methods, that established tolerances can be adequately enforced.

#### REGISTRATION

##### 1987 Program Request

The Agency requests a total of \$13,510,400 supported by 207.3 total workyears for this program, of which \$10,310,400 will be for the Salaries and Expenses appropriation and \$3,200,000 will be for the Abatement, Control and Compliance

appropriation. This represents an increase of \$700,100 and a decrease of \$245,200, respectively, and no change in total workyears. The overall increase represents increased support for New Chemicals and New Uses to permit a more rapid entry of new, potentially safer, chemicals into the marketplace.

In 1987, the Agency expects to conduct 330 reviews of new chemicals and biochemical/microbial agents, 4,650 reviews of old chemicals, 10,000 amended registration reviews, and 300 new use reviews. This is essentially the same level of reviews expected in 1986.

The Agency will continue to give priority to applications for new chemicals and new uses (especially the first food use of non-food use pesticides). Continued attention will be given to biochemical/microbial agents, including genetically altered products, in order to determine the scope of any required regulatory amendments and necessary interagency coordination for the effective regulation of such products. Emphasis will continue to be placed on reviewing data in support of food-use chemicals, feedthroughs, aquatic pesticides used in potable water, and other product classes of special concern.

Initiatives begun in 1986 and continuing in 1987 include more stringent requirements for conditional registrations; further development of Standard Evaluation Procedures to help ensure uniformity of science reviews and public understanding of review processes; the automated integration of EPA records of scientific studies, reviews, product information and other data; evaluation of potential groundwater contamination; and work on region-specific priority projects such as geographic-specific groundwater problems, the role of individual regions in monitoring systems, and the use of 1080 on prairie dogs. The efficacy of protective clothing will be considered so that better risk management decisions can be made and promulgated through label requirements. Worker Protection Standards are expected to be promulgated in 1987 as a result of negotiated rulemaking efforts in 1986.

The Agency plans to implement registration fees in 1987 to begin recovery of Agency costs for pesticide registration. Any fees collected would not affect the need for appropriated funds in 1987.

#### 1986 Program

In 1986, the Agency is allocating a total of \$13,055,500 supported by 207.3 total workyears for this program, of which \$9,610,300 is from the Salaries and Expenses appropriation and \$3,445,200 is from the Abatement, Control and Compliance appropriation.

Increased emphasis is being given to the groundwater contamination initiative in 1986 by imposing monitoring requirements on registrants, routinely assessing contamination potential through extensive review of environmental fate test data, and preventing or minimizing groundwater contamination through cancellation, geographical restriction, or restricted-use classifications.

Worker Protection Standards and procedures governing worker protection requirements, including pesticide-treated field reentry periods, protective clothing, and label warnings, are the subject of regulatory negotiation and proposal in 1986. The Agency is also highlighting and working on problems identified by the regions, such as geographically specific groundwater problems and the use of 1080 on prairie dogs.

The quality and speed of decision-making continues to be improved through Standard Evaluation Procedures (SEPs). The enhancement of the automation and management of the pesticides data base is improving the Agency's ability to identify data gaps and to prevent unanticipated adverse environmental impacts by bringing all available information to bear on regulatory decisions.

Registration fees may be proposed in 1986 to begin recovery of Agency processing costs.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$14,794,800 supported by 217.9 total workyears, of which \$10,129,400 was from the Salaries and Expenses appropriation and \$4,665,400 was from the Abatement, Control and Compliance appropriation.

In 1985, increased emphasis was placed on new chemical and new use applications resulting in output increases, over the 1985 estimate, of 7 percent and 16 percent respectively. Improvements were made in the quality and speed of decision-making through the establishment of Standard Evaluation Procedures (SEPs), the continued development of an integrated pesticide data base, and publication of Data Requirements for Registration and revised procedures for Data Support Requirements under FIFRA. These regulations have helped the decision-making process by providing a clear statement of registration requirements and reducing the uncertainty, paperwork, and review cycles associated with clarifying routine requirements with registrants.

### SPECIAL REGISTRATION

#### 1987 Program Request

The Agency requests a total of \$1,487,700 supported by 29.9 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents a decrease of \$11,500 and 2.0 total workyears. The decrease reflects an anticipated decrease in state and local needs reviews.

In 1987, State participation in Emergency Exemption, Experimental Use Permit, and Special Local Needs programs will continue to be enhanced through EPA guidance and close Federal/State cooperation. EPA will continue to monitor State actions in the Emergency Exemption and Special Local Needs registration programs to assure proper use of these provisions. The Agency will focus on the critical health and safety effects of emergency exemption requests. Experimental use permits (EUPs) will continue to be issued when appropriate to allow for experimentation with nonregistered products or uses to develop data needed for registration. A total of 400 EUP reviews is expected. Rapid communication with affected parties, States, and other measures will be continued to minimize processing times and backlogs. In 1987, 250 emergency exemption reviews and 475 State and local needs reviews are projected to be completed.

#### 1986 Program

In 1986, the Agency is allocating a total of \$1,499,200 supported by 31.9 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

In 1986, the Agency is issuing final revisions to regulations concerning Section 18 emergency exemptions under which criteria for granting exemptions will become more stringent in order to effectively assure their validity. The Agency has recently implemented a policy concerning genetically engineered, microbial pesticides (GEMPs) requiring notification of the Agency of intended small-scale field testing, and a 90-day period for the Agency to determine whether an EUP is required. The first experimental use permits for GEMPs were granted in November, 1985 for small field testing of altered bacteria to prevent frost damage to plants.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,087,100 supported by 45.0 total workyears, all of which was from the Salaries and Expenses appropriation.

Temporary tolerance petition review activities and associated resources were moved to the Tolerance program beginning in 1985. The purpose was to consolidate all tolerance setting and tolerance fee-related activities in the same program. Accomplishments in 1985 included the publication of the proposed revised rule developed through regulatory negotiation for Section 18 exemptions and work on establishing the Agency's policy on GEMPs.

### TOLERANCES

#### 1987 Program Request

The Agency requests a total of \$2,902,200 supported by 73.1 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$122,100 and a decrease of 0.7 total workyears. The increase in Salaries and Expenses reflects adjustments to the 1986 base as part of government-wide deficit reductions.

Requested resources will permit an anticipated 475 tolerance petition reviews, 150 temporary tolerance petition reviews, and 60 reviews of inert ingredient requests. Every effort will be made to minimize processing times and backlogs in responding to uncontrollable demand (petitions).

Special emphasis will be placed on policies to ensure that tolerances reflect the most current regulatory status of each active ingredient. Tolerances for cancelled pesticides will be revoked and replaced with appropriate action levels where necessary. The systematic use of the computer-based tolerance assessment system will yield more sophisticated estimates of dietary exposure to pesticide residues. Crop group tolerances will continue to be used where applicable and inert ingredient requests will receive more thorough review. Continued support will be provided to the Codex Alimentarius program and associated activities that set international tolerances. International tolerance levels will be adopted into the U.S. system whenever feasible in order to facilitate international trade, improve international consistency in pesticide regulation, and conserve U.S. resources by using the results of reviews by other countries and international organizations.

#### 1986 Program

In 1986, the Agency is allocating a total of \$2,780,100 supported by 73.8 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

The tolerance revocation policy requiring that EPA revoke a tolerance for a cancelled or suspended pesticide is being fully implemented in 1986. EPA expects this activity to increase as a result of voluntary cancellations and suspensions (many in response to Data Call-in), registration standards, and special reviews. In addition, the computer-based Tolerance Assessment System is being refined and selectively used to yield more realistic and sophisticated estimates of dietary exposure to pesticide residues.

Most of the tolerance fees collected in 1986 are under a revised fee structure, effective February, 1986. However, most of the 1986 workload and associated earnings (value of completed petitions) consist of petitions submitted in prior years under the old fee structure.

## 1985 Accomplishments

In 1985, the Agency obligated a total of \$3,131,400 supported by 78.5 total workyears for this program, all of which was from the Salaries and Expenses appropriation.

In 1985, emphasis was placed on improving the processing time for new tolerances, with special attention given to requests for tolerances for first-time uses. The activities and resources associated with temporary tolerance petitions were moved from the Special Registration program to the Tolerance program in order to consolidate all tolerance setting and tolerance fee-related activities.

The developing, computer-based Tolerance Assessment System was used selectively to refine the Office of Pesticides Programs' estimates of dietary exposure to pesticide residues. Revised tolerance fees were proposed and published in the Federal Register.

# PESTICIDES

## Generic Chemical Review

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
-----								
(DOLLARS IN THOUSANDS)								
-----								
PROGRAM								
-----								
Generic Chemical Review								
Salaries & Expenses	\$12,390.5	\$12,676.8	\$13,024.6	-\$560.0	\$12,464.6	\$13,063.7	\$599.1	
Abatement Control and Compliance	\$11,862.1	\$9,354.7	\$9,354.7	-\$402.3	\$8,952.4	\$9,354.7	\$402.3	
TOTAL	\$24,252.6	\$22,031.5	\$22,379.3	-\$962.3	\$21,417.0	\$22,418.4	\$1,001.4	
TOTAL:								
Salaries & Expenses	\$12,390.5	\$12,676.8	\$13,024.6	-\$560.0	\$12,464.6	\$13,063.7	\$599.1	
Abatement Control and Compliance	\$11,862.1	\$9,354.7	\$9,354.7	-\$402.3	\$8,952.4	\$9,354.7	\$402.3	
Generic Chemical Review	TOTAL	\$24,252.6	\$22,031.5	\$22,379.3	-\$962.3	\$21,417.0	\$22,418.4	\$1,001.4
PERMANENT WORKYEARS								
-----								
Generic Chemical Review	232.8	244.8	257.7		257.7	257.7		
TOTAL PERMANENT WORKYEARS	232.8	244.8	257.7		257.7	257.7		
TOTAL WORKYEARS								
-----								
Generic Chemical Review	249.6	260.4	274.3		274.3	274.3		
TOTAL WORKYEARS	249.6	260.4	274.3		274.3	274.3		

## PESTICIDES

### Generic Chemical Review

#### Budget Request

The Agency requests a total of \$22,418,400 supported by 274.3 total workyears for 1987, an increase of \$1,001,400 and no change in total workyears from 1986. Of the request, \$13,063,700 will be for the Salaries and Expenses appropriation and \$9,354,700 will be for the Abatement, Control and Compliance appropriation, an increase of \$599,100 and \$402,300, respectively.

#### Program Description

This subactivity includes:

Generic Chemical Review -- The primary products of the Generic Chemical Review program are 1) Data Call-In - to require registrants to fill gaps in the current registration data base in time for registration standards development and/or to aid in the identification of potentially unreasonable adverse effects; 2) Registration Standards - to enable the Agency to meet efficiently the statutory mandate to update and reexamine information on currently registered pesticides and to reregister them as appropriate; and 3) Special Review - to evaluate rigorously the risks and benefits of pesticides with an identified potential for producing significant adverse health or environmental effects and to take appropriate regulatory action (e.g., suspend, cancel, or return to registration).

#### GENERIC CHEMICAL REVIEW

##### 1987 Program Request

The Agency requests a total of \$22,418,400 supported by 274.3 total workyears for this program, of which \$13,063,700 will be for the Salaries and Expenses appropriation and \$9,354,700 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$599,100 and \$402,300, respectively, and no change in total workyears. The increase in both appropriations reflects increasing support for the registration standards program.

EPA will establish 25 registration standards on existing chemicals in 1987. The Agency will continue to develop registration standards by clusters of similar-use chemicals, giving priority to those having high exposure and potential hazard through their volume of use and/or food use. When all of the data required by the data call-in and registration standards programs are available and reviewed, the registration standard permits comprehensive review and updating to produce a final Regulatory Standard and Tolerance Reassessment (FRSTR). One FRSTR review will be conducted in 1987.

Some pesticide active ingredients are also used as inert ingredients in other formulated products, and many have the potential to cause unreasonable adverse effects. In 1987, the review of inert uses, as well as active uses, of one pesticide will be included in the registration standards program.

The Agency will resume the call-in of missing data for non-food use chemicals based on the 1986 evaluation of the 1985 test program wherein registrants identified data gaps. The Agency will continue its efforts to improve its product chemistry data base. This is necessary to determine inerts, impurities, and contaminants of toxicological concern in pesticide products and the types of studies necessary for a full health and safety assessment.



Review of studies called in during prior years, including studies of ground-water contamination and chronic health effects, will be continued. Priority will be given to those studies containing information regarding unreasonable adverse effects, as identified in accordance with section 6(a)(2) of FIFRA.

Resources requested for 1987 will enable the completion of 13 Special Review decisions. Special Reviews will be initiated according to revised criteria which more realistically reflect actual risk. The number of Special Reviews may vary since the initiation of Special Reviews is responsive to the identification of potential risks during registration standards development and the review of new chemicals, the outcomes of which cannot be predetermined. Administrative hearings will be held as required on regulatory action proposed by the Agency in the Special Review process.

The results of lab audits will be employed in the Special Review and Registration processes in order to assure that health and environmental effects data are used to support pesticide registration actions. The use of Integrated Pest Management (IPM) techniques in urban pest management will be strengthened in cooperation with other agencies. IPM will be considered in special reviews on a case-by-case basis, among the full range of potential risk-reduction measures that the Agency examines.

Monitoring of selected pesticide exposure problems and accidental exposure incidents will be continued in cooperation with various Federal, State and other institutional sources. Furthermore, the Pesticides program will continue to participate in a joint survey with the Office of Drinking Water to establish a reliable estimate of the national pesticide exposure risk through groundwater.

Beginning in 1987, the Agency plans to institute fees for its reregistration activities. The amounts collected would not affect the request for appropriated funds in 1987.

#### 1986 Program

In 1986, the Agency is allocating a total of \$21,417,000 supported by 274.3 total workyears for this program, of which \$12,464,600 is from the Salaries and Expenses appropriation and \$8,952,400 is from the Abatement, Control and Compliance appropriation.

The Agency is continuing to shift emphasis from the registration of new pesticides to the review of existing, currently registered pesticides whose registrations are more likely to be supported by incomplete data or data which are inadequate by today's standards. In 1986, the program emphasized support for registration standards follow-up, Final Regulatory Standards and Tolerance Reassessments (FRSTRs), review of inert uses of active ingredients, lab audits, and special reviews.

Twenty-five registration standards and 13 Special Reviews are projected for 1986. Emphasis is being placed on identifying and evaluating new chemicals which exceed the risk criteria. Also in 1986, previously called-in data is being reviewed, including data on chemicals used as termiticides and on grain fumigant alternatives to EDB.

The Agency is continuing to provide indemnification for losses resulting from the cancellation of ethylene dibromide (EDB) and 2,4,5-T, and to support the disposal of cancelled pesticides as required.

In the registration standards established to date, health and environmental problems have commonly been identified, and corrective actions taken to reduce risk. In every standard, important health and environmental data gaps are identified, and commitments are being received from registrants to generate and

submit required data expeditiously. The data needs are determined on a case-by-case basis, considering the use pattern and properties of each chemical. This ensures that the Agency asks only for data essential to its decision process and thereby minimizes costs to registrants and the public.

Exposure data is being called in to facilitate the evaluation of the significance of new and existing health effects data, allowing more timely Agency reactions to potentially serious hazards. This is vital since the Data Call-In program virtually completed in 1985 the call-in of long term chronic data for food use chemicals. In addition, the Data Call-In program is focusing on the call-in of updated confidential statements of formula (CSF) which are essential since most existing data are based on outdated requirements and procedures. Laboratory data audits are continuing to ensure the validity of laboratory studies performed to support registration.

The Agency expects that the number of pesticides determined to contaminate groundwater, and the number of locations involved, is increasing. OPP is participating in a groundwater monitoring and hazard assessment project to characterize this problem and formulate an appropriate regulatory response. In 1986 the principal activity is the initiation of a national groundwater survey conducted jointly with the Drinking Water program.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$24,252,600 supported by 249.6 total workyears, of which \$12,390,500 was from the Salaries and Expenses appropriation and \$11,862,100 was from the Abatement, Control and Compliance appropriation.

Special review decisions were reached on 11 chemicals. In addition, new review procedures were introduced, providing for early involvement of all EPA offices in the development of regulatory decisions, including Special Reviews.

In 1985, the Data Call-In program virtually completed call-in of long term chronic data for food use chemicals. A test program was initiated in 1985 to call in data on non-food use chemicals, featuring the identification of data gaps by registrants. The program will be resumed in 1987 following an evaluation in 1986.

Laboratory data audits were conducted by the Agency or cooperatively with other agencies to ensure the development of high-quality test data on the health and environmental effects of pesticides. The Agency began to provide indemnification for losses resulting from the cancellation of ethylene dibromide (EDB) and the disposal of products containing EDB.

# **Enforcement**



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# PESTICIDES

## Pesticides Enforcement

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
-----							
PROGRAM							
-----							
Pesticides Enforcement							
Salaries & Expenses	\$4,188.8	\$4,564.9	\$4,509.5	-\$194.0	\$4,315.5	\$4,496.1	\$180.6
Abatement Control and Compliance	\$88.8	\$195.0	\$195.0	-\$8.4	\$186.6	\$195.0	\$8.4
TOTAL	\$4,277.6	\$4,759.9	\$4,704.5	-\$202.4	\$4,502.1	\$4,691.1	\$189.0
Pesticides Enforcement Grants							
Abatement Control and Compliance	\$9,717.0	\$9,703.4	\$9,703.4	-\$417.2	\$9,286.2	\$8,703.4	-\$582.8
TOTAL	\$9,717.0	\$9,703.4	\$9,703.4	-\$417.2	\$9,286.2	\$8,703.4	-\$582.8
Pesticides Certification & Training							
Abatement Control and Compliance	\$2,596.3	\$2,600.0	\$2,600.0	-\$111.7	\$2,488.3	\$2,500.0	\$11.7
TOTAL	\$2,596.3	\$2,600.0	\$2,600.0	-\$111.7	\$2,488.3	\$2,500.0	\$11.7
TOTAL:							
Salaries & Expenses	\$4,188.8	\$4,564.9	\$4,509.5	-\$194.0	\$4,315.5	\$4,496.1	\$180.6
Abatement Control and Compliance	\$12,402.1	\$12,498.4	\$12,498.4	-\$537.3	\$11,961.1	\$11,398.4	-\$562.7
Pesticides Enforcement TOTAL	\$16,590.9	\$17,063.3	\$17,007.9	-\$731.3	\$16,276.6	\$15,894.5	-\$382.1
PERMANENT WORKYEARS							
-----							
Pesticides Enforcement	97.0	100.6	100.3		100.3	99.3	-1.0
TOTAL PERMANENT WORKYEARS	97.0	100.6	100.3		100.3	99.3	-1.0

# PESTICIDES

## Pesticides Enforcement

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
	(DOLLARS IN THOUSANDS)						
TOTAL WORKYEARS	-----						
Pesticides Enforcement	107.5	110.6	110.6		110.6	109.5	-1.1
TOTAL WORKYEARS	107.5	110.6	110.6		110.6	109.5	-1.1

## PESTICIDES

### Pesticides Enforcement

#### Budget Request

The Agency requests a total of \$15,894,500 supported by 109.5 total workyears for 1987, a decrease of \$382,100 and 1.1 total workyears from 1986. Of the request, \$4,496,100 will be for the Salaries and Expenses appropriation and \$11,398,400 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$180,600 and a decrease of \$562,700, respectively.

#### Program Description

The purpose of this sub-activity is to assure the compliance by all parts of the pesticide industry, including users, producers, and distributors, with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). This is accomplished primarily through cooperative enforcement agreements between States, Territories, and EPA.

This subactivity encompasses three program areas:

Pesticides Enforcement -- The pesticide enforcement program emphasizes compliance with FIFRA and related rules and regulations. The Regional offices negotiate and monitor grant activities for the Cooperative Enforcement programs and the State Applicator Certification and Training programs, and conduct compliance monitoring, enforcement, and certification and training activities in non-grant States. The Regional pesticides enforcement program also provides compliance and technical assistance to the agricultural chemical industry, commercial and private applicators, user groups, and States. EPA undertakes compliance assistance efforts to assist these groups with product registrations, special local needs registrations, and emergency exemptions, helping them understand and meet their obligations under FIFRA.

The Regional enforcement program provides assistance in enforcement actions initiated by the States. In addition, it prepares and issues notices of violation and administrative orders in instances where a State does not participate in the cooperative enforcement program or where a State refers a case to the Agency for action.

Headquarters provides overall program guidance and sets national program priorities. The major function of Headquarters includes providing support to regulation development, including enforcement response policies and compliance monitoring strategies; providing technical case development and general oversight to cooperative Federal/State enforcement programs and Federal/State applicator certification and training programs; and developing annual cooperative agreement guidance documents.

Pesticides Enforcement Grants -- Pesticides cooperative enforcement agreements account for most of the pesticides compliance monitoring enforcement activities. Under the terms of cooperative agreements with EPA, the States inspect pesticide producer establishments, provide marketplace surveillance, and investigate pesticide use, misuse, and reentry matters. Cooperative agreements also support the States in monitoring pesticide imports, inspecting pesticide dealer records, and reviewing commercial applicator records.

Pesticides Certification and Training -- EPA provides funds, divided between the training program and the certification program, to ensure that only competent, trained applicators handle, apply and store highly toxic, restricted-use pesticides. The Agency transfers funds for training applicators to the U.S. Department of Agriculture for distribution to State Cooperative Extension Services. EPA



distributes certification funds via cooperative agreements to designated State agencies. The States use funds for certification activities such as developing and grading examinations, issuing credentials, monitoring training, and keeping records of certified applicators. The Agency also provides funding for Federal certification and training programs in Colorado and Nebraska.

#### PESTICIDES ENFORCEMENT

##### 1987 Program Request

The Agency requests a total of \$4,691,100 supported by 109.5 total workyears for this program, of which \$4,496,100 will be for the Salaries and Expenses appropriation and \$195,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$180,600 and \$8,400, respectively, and a decrease of 1.1 total workyears. The increase reflects increasing support for cooperative agreements and State oversight.

In 1987, the pesticides enforcement program will again concentrate on State participation, under cooperative enforcement agreements, in the nationwide pesticide compliance monitoring program. The Agency will emphasize achieving compliance with rules governing pesticide use, with relatively less emphasis on product surveillance in the marketplace. The States will also be responsible for enforcing notices of intent to suspend product registrations issued under the Data Call-In program. The primary Federal role at the regional level will be oversight and management of State cooperative agreement programs and administration of Federal applicator certification and training programs in Colorado (for private applicators only) and Nebraska, and of a pesticides enforcement program in Nebraska.

In addition to providing overall program guidance and management, Headquarters will assist in the development of new and revised regulations and will develop compliance monitoring strategies and enforcement response policies for all such rules. Headquarters will provide guidance and general oversight to the Federal/State cooperative enforcement programs and applicator certification and training programs, plus technical and analytical support for regional activities. Both Headquarters and the regions are responsible for quality assurance and quality control of all enforcement data collected by EPA.

##### 1986 Program

In 1986, the Agency is allocating \$4,502,100 supported by 110.6 total workyears, which includes \$4,315,500 from the Salaries and Expenses appropriation and \$186,600 from the Abatement, Control and Compliance appropriation.

In 1986, the Agency is emphasizing State participation in pesticide compliance monitoring and enforcement activities through cooperative enforcement agreements. There are 54 States and Territories participating in cooperative enforcement agreements, 51 State certification programs, and 52 training programs. Federal compliance monitoring activities is continuing in States without cooperative agreements. Other Federal responsibilities include the management of the laboratory inspection/data audit program, import and export surveillance, provision of technical and compliance assistance to the States and the regulated community, and the operation of a computer system maintaining pesticide producer establishment and production records and other related enforcement data.

##### 1985 Accomplishments

In 1985, the Agency obligated \$4,277,600 supported by 107.5 total workyears, including \$4,188,800 from the Salaries and Expenses appropriation and \$88,800 from the Abatement, Control and Compliance appropriation.

In 1985, the Federal compliance monitoring program accomplished the following: 224 inspections of pesticide producing establishments, 242 use and reentry inspections, 355 marketplace inspections, 282 import inspections at ports of entry, 215 applicator license and record inspections, 263 dealer record inspections, and 86 laboratory inspections that included 291 test study audits. The Agency issued 1,343 notices of warning for product/producer and use violations and 236 administrative orders.

Headquarters prepared draft or final compliance monitoring strategies for Good Laboratory Practices (GLPs), the lindane cancellation, registration standards, Compound 1080 and daminozide restrictions, a revised strategy for FIFRA Section 3(c)(2)(B) data provision compliance, and preliminary strategies for dicofol and captan use restrictions. Headquarters also prepared a revised enforcement response policy for FIFRA Section 7 establishment reporting requirements.

A total of 54 cooperative enforcement agreements, 51 State certification programs, and 52 training programs were in place in 1985. As part of the cooperative agreement program, the Agency provided training for State inspectors, chemists and case development staff.

### PESTICIDES ENFORCEMENT GRANTS

#### 1987 Program Request

The Agency requests a total of \$8,703,400 for cooperative enforcement agreements, all for the Abatement, Control and Compliance appropriation. This represents a decrease of \$582,800, reflecting a reduction in State inspections under the cooperative enforcement agreement program. This grant will be included in a legislative proposal for block grants designed to give States more flexibility and autonomy in administering environmental programs.

The Agency will continue cooperative enforcement agreements with 54 participating States and Territories. The cooperative enforcement agreement program is designed to permit participating States and Territories to determine their program priorities and utilize the resources provided to act upon these priorities. State activities will include use and reentry investigations, pesticide producer establishment and marketplace inspections, applicator license and record inspections, and dealer record inspections. As compared with past years, resources will be shifted from marketplace sampling to provide greater emphasis upon use compliance.

#### 1986 Program

In 1986, the Agency is allocating a total of \$9,286,200 for cooperative agreements from the Abatement, Control and Compliance appropriation. These agreements emphasize user compliance with label directions for proper use and application, as well as manufacturer adherence to product formulation requirements under FIFRA.

#### 1985 Accomplishments

In 1985, the Agency obligated \$9,717,000 for cooperative agreements from the Abatement, Control and Compliance appropriation. Fifty-four participating States and Territories conducted approximately 1,916 inspections of establishments, 14,778 use, reentry, and experimental use inspections, 10,728 marketplace inspections, 323 import inspections, 12,545 applicator license and record inspections, and 9,263 dealer record inspections. The Agency issued 4,223 notices of violation and 335 administrative orders, and engaged in 186 criminal litigations.

## PESTICIDES CERTIFICATION AND TRAINING

### 1987 Program Request

The Agency requests a total of \$2,500,000 for the applicator certification and training program, all for the Abatement, Control and Compliance appropriation. This represents an increase of \$11,700, reflecting adjustments to the 1986 base as part of government-wide deficit reductions. This grant will be included in a legislative proposal for block grants designed to give States more flexibility and autonomy in administering environmental programs.

This program will support 51 applicator certification programs and 52 applicator training programs in participating States and Territories, as well as Federal certification programs in Colorado (for private applicators only) and Nebraska. These resources will continue to support the certification and training of applicators using highly toxic, restricted-use pesticides.

### 1986 Program

In 1986, the Agency is allocating a total of \$2,488,300 for cooperative agreements from the Abatement, Control and Compliance appropriation. This funding supports 51 applicator certification programs and 52 training programs with States and Territories, as well as Federal programs in Colorado (for private applicators only) and Nebraska. EPA is also developing an action plan to implement the recommendations of the task force that completed its review of the Pesticides Certification and Training program in 1985.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,596,300 for cooperative agreements from the Abatement, Control and Compliance appropriation in support of 51 certification programs and 52 training programs with States and Territories. In addition, these funds supported Federal programs in Colorado and Nebraska.

Also in 1985, a task force reviewed the Pesticides Certification and Training program to determine what actions, if any, should be taken to improve it. The task force was composed of representatives of EPA, USDA, State Cooperative Extension Services and State Lead Agencies.



# **Radiation**



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# RADIATION

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
--	----------------	----------------------------	-----------------	---------------------------------	-----------------------------	------------------	--

(DOLLARS IN THOUSANDS)

## APPROPRIATION

Salaries & Expenses	\$8,567.8	\$7,621.1	\$8,041.0	-\$345.6	\$7,695.4	\$8,161.4	\$466.0
Abatement Control and Compliance	\$2,939.8	\$2,144.6	\$2,144.6	-\$92.3	\$2,052.3	\$3,810.6	\$1,758.3
Research & Development	\$846.9	\$16.7	\$16.5	-\$0.7	\$15.8		-\$15.8
TOTAL, Radiation	\$12,354.5	\$9,782.4	\$10,202.1	-\$438.6	\$9,763.5	\$11,972.0	\$2,208.5

PERMANENT WORKYEARS	149.1	141.3	155.3		155.3	152.0	-3.3
TOTAL WORKYEARS	161.4	147.3	160.0		160.0	157.0	-3.0
OUTLAYS	\$16,068.9	\$9,758.4	\$12,723.5	-\$325.6	\$12,397.9	\$12,136.4	-\$261.5

## AUTHORIZATION LEVELS

All except Research and Development is by virtue of the Appropriation Act. The Research and Development Act expired September 30, 1981, and reauthorization is pending.



## RADIATION

### OVERVIEW AND STRATEGY

EPA's mandate to protect the public health and environment from adverse effects of radiation exposure is derived from several statutes: the Atomic Energy Act, which provides authority for Federal guidance and general environmental standards (transferred to EPA by Reorganization Plan #3 of 1970); the Clean Air Act Amendments of 1977, which provide authority to regulate radioactive air pollutants; the Resource Conservation and Recovery Act and the Uranium Mill Tailings Radiation Control Act, which charge EPA with providing standards for protection from waste materials with radioactive content; the Nuclear Waste Policy Act; and other authorities contained in the Federal Water Pollution Control Act; the Marine Protection, Research, and Sanctuaries Act; the Safe Drinking Water Act; the Public Health Service Act; and the National Environmental Policy Act.

These statutes generally prescribe environmental assessment, technology assessment, standard-setting, and research roles for EPA. The disposal of radioactive wastes in an environmentally sound manner is a complex task that involves the collective efforts of EPA, the Nuclear Regulatory Commission (NRC), the Department of Energy (DOE), States, and private industry. In some cases, enforcement responsibilities are vested in other agencies, notably the NRC. In these instances, EPA performs some oversight functions to ensure that established standards and guidance are followed.

The basic program strategy for EPA's Radiation Program focuses on three major objectives: (1) reduce health effects and environmental impacts; (2) assess emerging radiation problems; and (3) maintain a capability to respond to emergencies.

Reduce adverse health effects and environmental impacts from radiation exposure through a program of standards and guides. Source categories which emit airborne radionuclides are assessed and regulated, where required, by the promulgation and implementation of National Emission Standards for Hazardous Air Pollutants, under section 112 of the Clean Air Act. The various classes of radioactive wastes and their disposal options are evaluated and regulated in a program designed to ensure that disposal takes place in an environmentally sound manner which limits exposures. Principal tasks remaining include promulgation of standards for land and ocean disposal of low-level radioactive wastes, including natural and accelerator-produced materials, and regulation of permissible residual radioactivity levels at decommissioned nuclear facilities. Federal guidance is under development to limit occupational exposures to ionizing radiation, and for general exposure to radiofrequency radiation. In addition to these activities, ancillary efforts include development of permit criteria for the ocean disposal of radioactive wastes, and the examination of special problems associated with high-level wastes stored at the Department of Energy site at Hanford, Washington.

Assess and quantify existing and emerging radiation problems and their potential impact. Respond to issues of serious public concern. Knowledge of radiation exposure from some sources has become more widespread, and the potential for radiation contamination of environmental pathways is growing as greater uses are made of radioactive materials. Requests for assistance in site assessments and radiochemical analyses of environmental samples have increased substantially, particularly from the Federal sector. Measurements of radon levels from naturally occurring radium in soil and rocks in the Reading Prong areas of Pennsylvania, New Jersey, and New York, and the probability of similar exposure levels in other parts of the country, demonstrate the need to address this environmental problem. Therefore, the Agency is emphasizing the radon issue in 1986 and will continue to do so in 1987. EPA is coordinating its activities with DOE, which has a long-standing program in radon and related issues. EPA's short-term efforts to address radon exposure are: identifying the potential for high-risk areas; developing measurement capabilities in States; and encouraging private sector development of mitigation methods. Longer-term objectives include: providing criteria for determining high

risk lands; demonstrating low cost mitigation methods; expanding measurement capabilities of States; defining the distribution of risks in the United States; and informing the public and industry about measurement techniques, mitigation methods, and preventive techniques.

Maintain a capability to respond to emergencies and to aid development and testing of State, local, and Federal plans for emergency response. To provide continuous information on radiation levels in environmental pathways, the Agency maintains fully equipped emergency response teams which can be flown to sites where significant radiation releases have occurred or appear imminent. Protective Action Guides being developed will provide consistent guidance to responsible officials for preventive or remedial actions which should be taken to limit population exposure from unplanned releases of radiation. The Environmental Radiation Ambient Monitoring System provides a mechanism for tracking and measuring large atmospheric releases of radioactive materials across the country.

In 1987, the Agency will continue the off-site monitoring program. This effort supports the Department of Energy's operation of nuclear test sites. In addition, the quality assurance program for radiochemical analyses will be maintained. The Agency will also continue research on mitigating indoor radon levels. This effort is described in the air section of the budget request.

# RADIATION

	<u>Actual 1985</u>	<u>Budget Estimate 1986</u>	<u>Current Estimate 1986</u>	<u>Estimate 1987</u>	<u>Increase (+) Decrease (-) 1987 vs 1986</u>
<u>PROGRAM ACTIVITIES</u>					
<u>Cumulative Outputs</u>					
Regulations:					
Proposals.....	9	12	11	11	-
Promulgations.....	9	9	10	11	+1
Guides:					
Proposals.....	3	4	4	4	-
Promulgations.....	1	4	3	4	+1



# **Research and Development**



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# RADIATION

## Radiation Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
----- (DOLLARS IN THOUSANDS) -----							
PROGRAM -----							
Monitoring Systems & Quality Assurance - Radiation							
Salaries & Expenses	\$201.2	\$196.3	\$196.3	-\$8.4	\$187.9	\$196.3	\$8.4
Research & Development	\$16.7	\$16.7	\$16.5	-\$ .7	\$15.8		-\$15.8
TOTAL	\$217.9	\$213.0	\$212.8	-\$9.1	\$203.7	\$196.3	-\$7.4
Health Effects - Radiation							
Salaries & Expenses	\$811.5						
Research & Development	\$830.2						
TOTAL	\$1,641.7						
TOTAL:							
Salaries & Expenses	\$1,012.7	\$196.3	\$196.3	-\$8.4	\$187.9	\$196.3	\$8.4
Research & Development	\$846.9	\$16.7	\$16.5	-\$ .7	\$15.8		-\$15.8
Radiation Research TOTAL	\$1,859.6	\$213.0	\$212.8	-\$9.1	\$203.7	\$196.3	-\$7.4
PERMANENT WORKYEARS -----							
Monitoring Systems & Quality Assurance - Radiation	3.8	5.0	5.0		5.0	5.0	
Health Effects - Radiation	15.2						
TOTAL PERMANENT WORKYEARS	19.0	5.0	5.0		5.0	5.0	



# RADIATION

## Radiation Research

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
-----							
TOTAL WORKYEARS							
-----							
Monitoring Systems & Quality Assurance - Radiation	4.7	5.0	5.0		5.0	5.0	
Health Effects - Radiation	15.8						
TOTAL WORKYEARS	20.5	5.0	5.0		5.0	5.0	

# RADIATION

## Radiation Research

### Principal Outputs by Objective

#### 1987 PLANNED OUTPUTS

##### Objective 1: Conduct an Off-Site Radiological Monitoring Program

- o Annual report of off-site surveillance around the Nevada Test Site (NTS) -- Calendar Year 1986 (Monitoring)

##### Objective 2: Conduct an Analytical Radiochemical Quality Assurance Program

- o Annual report on laboratory radionuclide intercomparison studies (Monitoring)

#### 1986 PLANNED OUTPUTS

##### Objective 1: Conduct an Off-Site Radiological Monitoring Program

- o Annual report of off-site surveillance around the Nevada Test Site -- Calendar Year 1985 (Monitoring)

##### Objective 2: Conduct an Analytical Radiochemical Quality Assurance Program

- o Annual report on laboratory radionuclide intercomparison studies (Monitoring)

#### 1985 ACTUAL OUTPUTS

##### Objective 1: Conduct an Off-Site Radiological Monitoring Program

- o Annual report of off-site surveillance around the Nevada Test Site -- Calendar Year 1984 (Monitoring)

##### Objective 2: Conduct an Analytical Radiochemical Quality Assurance Program

- o Annual report on laboratory radionuclide intercomparison studies (Monitoring)

## RADIATION

### Radiation Research

#### Budget Request

The Agency requests a total of \$196,300 supported by 5.0 total workyears for 1987, a decrease of \$7,400 and no change in total workyears from 1986. The entire request will be for the Salaries and Expenses appropriation. This represents an increase of \$8,400 in the Salaries and Expenses appropriation and a decrease of \$15,800 in the Research and Development appropriation.

#### Program Description

The goal of the radiation research program is to provide the Office of Radiation Programs (ORP), and other EPA, federal, regional, state and local officials with scientifically credible data, methodologies, and assessments required to determine public exposure to radioactive materials in the environment and to control such exposure. The following objectives support this goal:

Objective 1. Conduct an Off-Site Radiological Monitoring Program. The program under this objective provides comprehensive radiological monitoring and surveillance services to meet specific Department of Energy (DOE) requirements for its nuclear testing programs, especially at the Nevada Test Site (NTS). This work is conducted under a reimbursable arrangement with DOE.

Objective 2. Conduct an Analytical Radiochemical Quality Assurance Program. EPA conducts a radiochemical analytical quality assurance program which supports federal, regional, state, and local laboratories making radioactivity measurements to assess the impact of local nuclear facilities. It also supports the Office of Radiation Programs by serving as a source of radionuclide and instrument standards and radiochemical methods for analysis of environmental samples.

#### MONITORING SYSTEMS AND QUALITY ASSURANCE

##### 1987 Program Request

The Agency requests a total of \$196,300 supported by 5.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$8,400 in the Salaries and Expenses appropriation and a decrease of \$15,800 in the Research and Development appropriation, and no change in total workyears. The increase in Salaries and Expenses reflects adjustments to the 1986 base as part of government-wide deficit reductions. The decrease in Research and Development reflects the Agency's ability to carry out its responsibilities in this program without an extramural component.

Conduct an Off-Site Radiological Monitoring Program. Monitoring support to DOE's Nevada Test Site and other test locations will continue. This support consists of safety programs for nuclear testing and monitoring at the NTS as well as at sites in Mississippi, Colorado, and New Mexico.

Conduct an Analytical Radiochemical Quality Assurance Program. Technical expertise and guidance to regional, state, and contractor laboratories for radiochemical analyses of environmental samples will continue. Inter-laboratory comparison studies will be initiated to provide data on the precision and accuracy of radioactivity measurements in milk, simulated diet, drinking water, and air.

#### 1986 Program

In 1986, the Agency is allocating a total of \$203,700 supported by 5.0 total workyears for this program, of which \$187,900 is from the Salaries and Expenses appropriation and \$15,800 is from the Research and Development appropriation.

In 1986, annual reports are being developed on off-site surveillance around the Nevada Test Site and on laboratory radionuclide comparison studies.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$217,900 supported by 4.7 total workyears for this program, of which \$201,200 was from the Salaries and Expenses appropriation and \$16,700 was from the Research and Development appropriation.

In 1985, the major accomplishments were the publication of the annual report on the Laboratory Radionuclide Intercomparison Studies and the annual report of off-site surveillance around the Nevada Test Site. Quality assurance support was also provided.

#### HEALTH EFFECTS

##### 1987 Program Request

The Agency requests no resources for this activity in 1987.

#### 1986 Program

The Agency is allocating no resources for this program in 1986, reflecting the completion of health effects research needed to support the development of Federal Radiation Protection Guidance. A core staff is being maintained to ensure the orderly phase-out of the program.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,641,700 supported by 15.8 total workyears for this program, of which \$811,500 was from the Salaries and Expenses appropriation and \$830,200 was from the Research and Development appropriation.

Health effects research on non-ionizing radiation focused primarily on questions remaining since completion of a 1984 report on the biological effects of radiofrequency radiation.

# **Abatement and Control**



ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# RADIATION

## Radiation Criteria, Standards & Guidelines

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
Radiation Criteria, Standards & Guidelines							
Salaries & Expenses	\$3,840.7	\$3,756.2	\$3,691.1	-\$158.6	\$3,532.5	\$3,499.0	-\$33.5
Abatement Control and Compliance	\$2,035.9	\$1,544.6	\$1,544.6	-\$66.4	\$1,478.2	\$1,060.6	-\$417.6
TOTAL	\$5,876.6	\$5,300.8	\$5,235.7	-\$225.0	\$5,010.7	\$4,559.6	-\$451.1
TOTAL:							
Salaries & Expenses	\$3,840.7	\$3,756.2	\$3,691.1	-\$158.6	\$3,532.5	\$3,499.0	-\$33.5
Abatement Control and Compliance	\$2,035.9	\$1,544.6	\$1,544.6	-\$66.4	\$1,478.2	\$1,060.6	-\$417.6
Radiation Criteria, Standards & Guidelines TOTAL	\$5,876.6	\$5,300.8	\$5,235.7	-\$225.0	\$5,010.7	\$4,559.6	-\$451.1
PERMANENT WORKYEARS							
-----							
Radiation Criteria, Standards & Guidelines	69.7	72.3	72.3		72.3	67.0	-5.3
TOTAL PERMANENT WORKYEARS	69.7	72.3	72.3		72.3	67.0	-5.3
TOTAL WORKYEARS							
-----							
Radiation Criteria, Standards & Guidelines	71.8	74.0	74.0		74.0	69.0	-5.0
TOTAL WORKYEARS	71.8	74.0	74.0		74.0	69.0	-5.0



## RADIATION

### Radiation Criteria, Standards, and Guidelines

#### Budget Request

The Agency requests a total of \$4,559,600 supported by 69.0 total workyears for 1987, a decrease of \$451,100 and 5.0 total workyears from 1986. Of the request, \$3,499,000 will be for the Salaries and Expenses appropriation and \$1,060,600 will be for the Abatement, Control and Compliance appropriation, decreases of \$33,500 and \$417,600 respectively.

#### Program Description

EPA develops and promulgates radiation environmental standards and guidelines under this subactivity. These standards and guidelines protect the public health and the environment by minimizing risk of radiation exposures from nuclear energy applications, naturally occurring radioactive materials, medical and occupational radiation uses, and nonionizing radiation.

#### RADIATION CRITERIA, STANDARDS, AND GUIDELINES

##### 1987 Program Request

The Agency requests a total of \$4,559,600 supported by 69.0 total workyears for this program, of which \$3,499,000 will be for the Salaries and Expenses appropriation and \$1,060,600 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of \$33,500 and \$417,600, respectively, and a decrease of 5.0 total workyears. The decreases reflect streamlining support for regulation and guidance development.

In 1987, EPA will concentrate on three major areas: addressing airborne radionuclides, establishing standards for radioactive waste management, and developing Federal Guidance. The airborne radionuclides work will focus on the completion of a review of phosphogypsum piles for the potential development of National Emission Standards for Hazardous Air Pollutants (NESHAPs) under section 112 of the Clean Air Act, as well as following up on the existing standards as necessary.

As part of programs addressing the problem of radioactive waste disposal, EPA will examine extending the coverage of the high-level waste standards to address special defense related wastes which are presently stored in various locations. Much of this effort will focus on Hanford, Washington. EPA will also promulgate the low-level radioactive waste standard, which has been expanded to cover concentrated natural and accelerator produced radioactive materials. In addition, EPA will continue technical work on the development of environmental standards or Federal Guidance for residual radioactivity limits at decommissioned nuclear facilities.

In 1987, EPA will complete the development of technical criteria for ocean dumping of radioactive wastes. The Agency will prepare to review and decide on permit applications which may be received for ocean dumping. The Agency will also participate in deliberations of the London Dumping Convention and other international bodies which are concerned with ocean disposal.

In 1987, EPA will take appropriate action to complete Protective Action Guides (PAGs) for airborne plume and ingestion pathways, which will be added to the Manual of Protective Actions. This manual is used in Federal, State, and local emergency preparedness plans in the event of a radiation incident. A draft of the relocation and recovery PAGs will be completed in 1987. In addition, EPA will publish the final radiofrequency radiation guidance. Support to other Federal agencies will be given in the implementation of existing Federal Guidance covering nonionizing radiation, diagnostic uses of medical x-rays, and occupational exposure of workers.

## 1986 Program

In 1986, the Agency is allocating a total of \$5,010,700 supported by 74.0 total workyears for this program, of which \$3,532,500 is from the Salaries and Expenses appropriation and \$1,478,200 is from the Abatement, Control and Compliance appropriation.

During 1986, regulatory projects have three focal points: (1) regulation of airborne radionuclides under section 112 of the Clean Air Act, (2) management of radioactive wastes under the authorities of the Atomic Energy Act; the Nuclear Waste Policy Act; the Uranium Mill Tailings Radiation Control Act; and the Marine Protection, Research, and Sanctuaries Act, and (3) development of Federal Guidance under the provisions of the Atomic Energy Act.

A final NESHAPs for licensed uranium mills is expected to be promulgated in 1986. Work will continue on the risk assessment of phosphogypsum piles prior to making the determination of whether regulatory action is needed. Agreements are being negotiated with Department of Energy (DOE) and the Nuclear Regulatory Commission (NRC) on how NESHAPs will be implemented at facilities under their cognizance. The Agency's continuing effort in the high-level waste area includes taking actions necessary to interpret the high-level waste standards relative to their implementation. The standard to be proposed in 1986 for land disposal of low-level radioactive wastes has been extended to cover discrete sources of natural and accelerator-produced radioactive materials. Analytical work necessary to develop environmental standards for residual radioactivity at decommissioned nuclear facilities also continues, with the issuance of an advance notice of proposed rulemaking. Analytical work continues to support the Agency's capability to review permit applications for the ocean disposal of radioactive wastes. A biological monitoring criteria report and a draft site selection criteria report on ocean disposal is being completed. Participation in international deliberations continues. Guidance for radiofrequency radiation is a candidate for proposal and working arrangements may be established with affected agencies for subsequent implementation of the guidance. The final general occupational exposure guidance will be published in 1986. Drafts of PAGs for airborne plume and ingestion pathways will be completed, while development of the relocation and recovery PAGs continues. EPA and other Federal agencies are working together to assure adequate implementation of existing regulations.

## 1985 Accomplishments

In 1985, the Agency obligated a total of \$5,876,600, supported by 71.8 total workyears for this program, of which \$3,840,700 was from the Salaries and Expenses appropriation and \$2,035,900 was from the Abatement, Control and Compliance appropriation.

Contract funds and workyears supported the gathering of data and analyses for standards setting, particularly in the areas of airborne radionuclides and radioactive waste disposal. This led to the completion of NESHAPs for four source categories: NRC and DOE facilities, non-DOE facilities, elemental phosphorus plants and underground uranium mines, and to the issuance of the high-level radioactive waste disposal standards. Progress continued on standards for low-level waste disposal, guidance for general occupational radiation exposure, and guidance to limit exposure to radiofrequency radiation. Work was instituted on the development of several PAGs for use in the event of a nuclear incident. In addition, the Agency moved forward with its program to establish standards or guidance for residual radioactivity at decommissioned nuclear facilities.

# RADIATION

## Radiation Program Implementation

		ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----								
(DOLLARS IN THOUSANDS)								
-----								
PROGRAM								
-----								
Radiation Program Implementation								
Salaries & Expenses		\$628.7	\$655.1	\$601.7	-\$25.9	\$575.8	\$616.7	\$40.9
TOTAL		\$628.7	\$655.1	\$601.7	-\$25.9	\$575.8	\$616.7	\$40.9
TOTAL:								
Salaries & Expenses		\$628.7	\$655.1	\$601.7	-\$25.9	\$575.8	\$616.7	\$40.9
Radiation Program Implementation	TOTAL	\$628.7	\$655.1	\$601.7	-\$25.9	\$575.8	\$616.7	\$40.9
PERMANENT WORKYEARS								
-----								
Radiation Program Implementation		10.1	10.0	10.0		10.0	10.0	
TOTAL PERMANENT WORKYEARS		10.1	10.0	10.0		10.0	10.0	
TOTAL WORKYEARS								
-----								
Radiation Program Implementation		12.6	12.3	11.0		11.0	11.0	
TOTAL WORKYEARS		12.6	12.3	11.0		11.0	11.0	

## RADIATION

### Radiation Program Implementation

#### Budget Request

The Agency requests a total of \$616,700 supported by 11.0 total workyears for 1987, an increase of \$40,900 and no change in total workyears from 1986. All of the request will be for the Salaries and Expenses appropriation.

#### Program Description

This program supports activities of EPA's Regional offices and includes: implementing the Radon Action Program, participating in the review and testing of State radiological emergency response plans, reviewing environmental impact statements, providing the public with technical information, providing direct assistance to State and local governments with special radiation problems of a short-term nature, and providing the radiological expertise needed by the Regions to manage radiological problems associated with the drinking water and hazardous waste programs.

#### RADIATION PROGRAM IMPLEMENTATION

##### 1987 Program Request

The Agency requests a total of \$616,700 supported by 11.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$40,900 and no change in total workyears from 1986. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions.

In 1987, selected Regional Offices will help implement the Radon Action Program, which addresses radon exposures from naturally occurring sources, by providing information on the assessment and mitigation of radon in structures. EPA will also continue to emphasize technical assistance to States for emergency response planning. EPA assists States in the development of radiological emergency response plans and formally reviews these plans along with other Federal agencies under the coordination of the Federal Emergency Management Agency. Regional Offices will continue to be involved in the characterization and identification of hazardous waste sites contaminated by radioactivity. This effort supports both the EPA Headquarters hazardous waste programs and the requests from the States. The Regions will continue to be the primary reviewers of environmental impact statements for radiation facilities, such as commercial nuclear power plants, uranium mines and mills, and radioactive waste disposal facilities. The Regions will assist in the implementation of promulgated standards and guidelines. They will be involved with State agencies and the public to present and explain Agency radiation regulations, particularly those for low-level waste disposal and radiofrequency radiation. They will provide continued support to the States for the management of radioactive wastes.

##### 1986 Program

In 1986, the Agency is allocating a total of \$575,800 supported by 11.0 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

In 1986, selected Regional Offices are providing support in the development of data and information in the improvement of State capabilities for the implementation of EPA's Radon Action Program. Emergency preparedness and technical assistance to the States on radioactive waste problems also remains a central focus of the EPA Regional radiation program. Regional programs continue to be involved in the characterization of hazardous waste sites subject to possible remedial action. The Regions are also continuing as the primary reviewer of environmental impact statements for radiation facilities such as uranium mines and mills, and radioactive waste disposal facilities. Support to the national program is in the form of participation in the Environmental Radiation Ambient Monitoring System and regulatory work groups and task forces. Cooperation with EPA's Superfund Program will continue and be enhanced to identify and survey potential dump sites for radiation contamination and removal.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$628,700 supported by 12.6 total workyears for this program, all of which was from the Salaries and Expenses appropriation.

Emergency preparedness and technical assistance to the States and other EPA Regional programs remained the central focus of the EPA Regional radiation program. Regions continued to review environmental impact statements for radiation facilities, such as uranium mills and mines, and radioactive waste disposal sites. They continued to be involved with the characterization of hazardous waste sites subject to possible remedial action under EPA's Superfund Program.

# RADIATION

## Radiation Environmental Impact Assessment

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
----- (DOLLARS, IN THOUSANDS) -----							
PROGRAM -----							
Radiation Environmental Impact Assessment							
Salaries & Expenses	\$3,085.7	\$3,013.5	\$3,551.9	-\$152.7	\$3,399.2	\$3,849.4	\$450.2
Abatement Control and Compliance	\$903.9	\$600.0	\$600.0	-\$25.9	\$574.1	\$2,750.0	\$2,175.9
TOTAL	\$3,989.6	\$3,613.5	\$4,151.9	-\$178.6	\$3,973.3	\$6,599.4	\$2,626.1
TOTAL:							
Salaries & Expenses	\$3,085.7	\$3,013.5	\$3,551.9	-\$152.7	\$3,399.2	\$3,849.4	\$450.2
Abatement Control and Compliance	\$903.9	\$600.0	\$600.0	-\$25.9	\$574.1	\$2,750.0	\$2,175.9
Radiation Environmental Impact Assessment TOTAL	\$3,989.6	\$3,613.5	\$4,151.9	-\$178.6	\$3,973.3	\$6,599.4	\$2,626.1
PERMANENT WORKYEARS -----							
Radiation Environmental Impact Assessment	50.3	54.0	68.0		68.0	70.0	2.0
TOTAL PERMANENT WORKYEARS	50.3	54.0	68.0		68.0	70.0	2.0
TOTAL WORKYEARS -----							
Radiation Environmental Impact Assessment	56.5	56.0	70.0		70.0	72.0	2.0
TOTAL WORKYEARS	56.5	56.0	70.0		70.0	72.0	2.0

## RADIATION

### Radiation Environmental Impact Assessment

#### Budget Request

The Agency requests a total of \$6,599,400 supported by 72.0 total workyears for 1987, an increase of \$2,626,100 and 2.0 in total workyears from 1986. Of the request, \$3,849,400 will be for the Salaries and Expenses appropriation and \$2,750,000 will be for the Abatement, Control and Compliance appropriation, an increase of \$450,200 and \$2,175,900, respectively.

#### Program Description

Activities in this program provide the information necessary to identify and analyze radiological problems having potential public health impacts and to support the development of standards and guidelines. Also included under this subactivity is the monitoring of environmental radiation, as well as laboratory analysis, technology assessments, emergency preparedness, and emergency response.

### RADIATION ENVIRONMENTAL IMPACT ASSESSMENT

#### 1987 Program Request

The Agency requests a total of \$6,599,400 supported by 72.0 total workyears for this program, of which \$3,849,400 will be for the Salaries and Expenses appropriation and \$2,750,000 will be for the Abatement, Control and Compliance appropriation. This represents increases of \$450,200 and \$2,175,900, respectively, and an increase of 2.0 total workyears. The increases will be used to support the Radon Action Program.

In 1987, EPA will continue to implement a comprehensive Radon Action Program that assists the Department of Energy (DOE) in addressing health impacts of radon exposure. This program includes a national assessment of the health problem, development of preventive practices, assistance in low-cost remedial techniques, field measurements, and development of State and local capabilities. EPA will also continue to support development of standards under the Clean Air Act, the Atomic Energy Act, and other legislative authorities. Field studies used to form the basis of risk assessments and associated risk management decisions will be continued. The residual radioactivity regulatory initiative will require continued field support to evaluate and confirm assumptions built into the development process, including field measurement and analyses. EPA will maintain fully-equipped emergency response capabilities at two field locations. The Environmental Radiation Ambient Monitoring System (ERAMS) will collect and analyze samples of air, precipitation, and milk in its national network to determine ambient radiation levels and will maintain its preparedness to monitor the environment in the event of a large-scale release of radioactive effluents, such as that which will result from atmospheric testing of nuclear devices. The quality assurance program will be operated to ensure accuracy of all laboratory measurements and data analyses conducted either inhouse or through program contracts. In addition, support to States, other Federal agencies, and other parts of EPA will continue in the form of radiochemical analyses, technical assistance, and EPA participation in the Conference of Radiation Control Program Directors. Monitoring of radiation levels in the Three Mile Island area will continue while the reactor core is being removed.

#### 1986 Program

In 1986, the Agency is allocating a total of \$3,973,300 supported by 70.0 total workyears for this program, of which \$3,399,200 is from the Salaries and Expenses appropriation and \$574,100 is from the Abatement, Control and Compliance appropriation.

In 1986, EPA will begin a Radon Action Program, a comprehensive radon assessment and mitigation effort to identify the extent of the health hazard associated with elevated radon levels in structures. EPA's program will be designed and coordinated with DOE's long-standing program. A national assessment methodology will be developed, and standardized measurement techniques and protocols will be established. Information about existing measurement methods, remediation and preventive practices, and health risks will be developed. Field validation and preliminary identification of high risk areas will be started. Particular emphasis will be placed on the Reading Prong areas of Pennsylvania, New Jersey, and New York.

In addition to the Radon Action Program, other activities include: continued laboratory and technical support to regulatory and guidance activities, maintenance of an emergency response capability, coordination of EPA Regional Office review and testing of State emergency response plans, assistance to other EPA offices and to State radiological programs, and support for ERAMS. The 1986 program reflects continuing emphasis on standard-setting activities, including resources for Clean Air Act field and laboratory measurements for a uranium mills NESHAPs necessary to meet the regulatory schedule, and further development of the standards information for low-level waste disposal and residual radioactivity at decommissioned nuclear facilities. The Agency will continue its replacement of radiation air monitoring sampling equipment and will continue to monitor and sample air, precipitation, surface water, and milk. Ocean disposal monitoring activities will continue with monitoring and analysis of water, biota, and sediment core samples at numerous ocean sites and development of ocean disposal technical radiation criteria. The monitoring of off-site releases from clean-up operations at Three Mile Island will also continue. Operation of a quality assurance plan for all program activities will continue. In addition, a comprehensive environmental assessment in the Pocatello and Soda Springs areas of Idaho will be initiated.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$3,989,600 and 56.5 total workyears for this program, of which \$3,085,700 was from the Salaries and Expenses appropriation and \$903,900 was from the Abatement, Control and Compliance appropriation.

Activities in 1985 included: development of a plan for a Radon Action Program; continued laboratory and technical support to standards-setting, particularly under the Clean Air Act for the development of four NESHAPs; maintenance of an emergency response capability; coordination of EPA Regional Office reviews and testing of State emergency response plans; and assistance to other EPA offices and to State radiological programs. ERAMS was maintained. Ocean disposal monitoring activities included the development of survey and sampling information, analysis of core samples, and development of criteria information in support of a low-level waste ocean disposal regulation. Extramural funds provided partial support to monitoring activities at Three Mile Island, support to the Conference of Radiation Control Program Directors, and studies necessary to develop scientific information for the EPA ocean disposal program.



# **Interdisciplinary**



ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# INTERDISCIPLINARY

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
APPROPRIATION							
Salaries & Expenses	\$25,506.0	\$25,107.0	\$26,770.7	-\$1,150.7	\$25,620.0	\$27,225.2	\$1,605.2
Abatement Control and Compliance	\$7,808.2	\$7,159.3	\$7,759.3	-\$333.9	\$7,425.4	\$5,133.7	-\$2,291.7
Research & Development	\$22,175.7	\$14,900.0	\$21,742.8	-\$935.0	\$20,807.8	\$15,516.0	-\$5,291.8
TOTAL, Interdisciplinary	\$55,489.9	\$47,166.3	\$56,272.8	-\$2,419.6	\$53,853.2	\$47,874.9	-\$5,978.3
PERMANENT WORKYEARS	482.5	491.0	537.7		537.7	544.3	6.6
TOTAL WORKYEARS	533.0	521.5	568.2		568.2	570.0	1.8
OUTLAYS	\$54,857.8	\$48,252.6	\$60,916.3	-\$1,343.6	\$59,466.7	\$52,572.7	-\$7,106.0
AUTHORIZATION LEVELS	All except Research and Development is by virtue of the Appropriation Act. The Research and Development Act expired September 30, 1981, and reauthorization is pending.						

## INTERDISCIPLINARY

### OVERVIEW AND STRATEGY

The Environmental Protection Agency's (EPA) Interdisciplinary Program is composed of several activities that cut across programmatic lines and are not readily assignable to a specific media. These programs address environmental concerns that affect several media and require an interdisciplinary approach. The Interdisciplinary Program includes the Intermedia Research Program within the Research and Development function, the Federal Agencies Compliance Program and the National Environmental Policy Act (NEPA) Compliance Program within the Abatement and Control function, and the legal aspects of the Agency's enforcement efforts.

The Intermedia Research Program encompasses four major activities: scientific assessments, technical information and liaison, exploratory research, and quality assurance management. The Scientific Assessment Program has responsibility for developing uniform risk assessment guidelines for Agencywide application, assuring consistency of approach to guidelines, and coordinating with other agencies through the Risk Assessment Forum. The Technical Information and Liaison Program distributes technical and scientific information from the Office of Research and Development with an emphasis on communicating cost-effective methods for complying with EPA's regulations. The Exploratory Research Program provides long-range exploratory research, conducted primarily through grants and academic research centers. It includes the Distinguished Visiting Scientist Program and the Environmental Trends Program. The Quality Assurance Program provides centralized guidance and management for Agencywide Quality Assurance activities, and performs audits to assess the effectiveness of the Agency Quality Assurance efforts.

The Environmental Review and Coordination Program accomplishes statutory objectives under the authority of NEPA; Section 309 of the Clean Air Act; and Executive Order 12088 - Federal Compliance with Pollution Control Standards, and includes four program activities. The NEPA Compliance program includes the preparation of the Environmental Impact Statements or Findings of No Significant Impact for those agency programs specifically covered by NEPA as well as reviews that are the functional equivalent for those agency programs that are not specifically covered by NEPA. The Federal Facilities program oversees Federal compliance with all Federal statutory environmental requirements, and specifically with Executive Order 12088. The Environmental Review program ensures that Federal agencies carry out their activities in an environmentally sound manner pursuant to NEPA and Section 309 of the Clean Air Act. The Indians program develops and implements policies for dealing with environmental problems on Indian reservations.

Enforcement Policy and Operations provides consistent direction to EPA enforcement for all non-Superfund media to assure the most effective possible stewardship of EPA's enforcement responsibilities as they contribute to the protection of environmental quality. To accomplish this goal, it establishes compliance monitoring and enforcement priorities, policies, and procedural guidelines so that enforcement actions are properly selected and prepared; establishes measures for and monitors performance in achievement of enforcement outcomes; and assures that policies and procedures are correctly implemented by the media enforcement programs and Regional offices. It conducts all legal case development, litigation, and adjudicatory hearing activities for media enforcement programs, including oversight of evidence gathering, preparation and management of cases, and referral of cases to the Department of Justice for litigation.

In addition, this program contains the Agency's criminal investigations effort which entails investigation, preparation, and referral of cases involving criminal violations of environmental statutes. Investigators and attorneys provide support to the Department of Justice during subsequent investigation and litigation of these cases. The National Enforcement Investigations Center (NEIC) provides

specialized technical expertise in support of EPA enforcement case preparation activities. NEIC serves as a point of coordination and support for complex investigations, which have a national impact on environmental enforcement. In 1987, this interdisciplinary program will emphasize the support and resolution of ongoing cases in order to maximize environmental benefits by improving compliance with environmental statutes. This program will be increasing its support of the Hazardous Waste Program.

# INTERDISCIPLINARY

<u>PROGRAM ACTIVITIES</u>	<u>Actual 1985</u>	<u>Budget Estimate 1986</u>	<u>Current Estimate 1986</u>	<u>Estimate 1987</u>	<u>Increase + Decrease - 1987 vs. 1986</u>
<u>Enforcement Actions</u>					
Inspections*	-	-	-	-	-
Notices of Violations*	-	-	-	-	-
Administrative Orders	2623	**	2452	2580	+ 128
Civil Cases					
Ongoing	154	**	163	171	+ 8
New	247	197	210	213	+ 3
Criminal Cases					
Investigations	100	**	100	100	0
Referrals to DOJ	36	37	38	38	0
Permit Support					
RCRA	***	NA	77	95	+ 18
NPDES	***	NA	104	104	0
UIC	***	NA	659	624	- 35

- \* No Interdisciplinary action, see specific media for these outputs.
- \*\* Numbers are not comparable due to change in definition of output.
- \*\*\* No Regional support was provided in 1985.





# **Research and Development**



ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# INTERDISCIPLINARY

## Intermedia Programs

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
-----							
PROGRAM							
-----							
Technical Information & Liaison							
Salaries & Expenses	\$1,948.4	\$1,795.0	\$1,786.7	-\$76.8	\$1,709.9	\$1,743.4	\$33.5
Research & Development	\$905.7	\$847.2	\$788.8	-\$33.9	\$754.9	\$716.0	-\$38.9
TOTAL	\$2,854.1	\$2,642.2	\$2,575.5	-\$110.7	\$2,464.8	\$2,459.4	-\$5.4
Exploratory Research Core Program - Interdisciplinary							
Salaries & Expenses	\$860.8	\$658.5	\$655.6	-\$28.1	\$627.5	\$538.0	-\$89.5
Research & Development	\$20,395.2	\$13,226.1	\$20,160.6	-\$866.9	\$19,293.7	\$13,600.0	-\$5,693.7
TOTAL	\$21,256.0	\$13,884.6	\$20,816.2	-\$895.0	\$19,921.2	\$14,138.0	-\$5,783.2
Scientific Assessment Interdisciplinary							
Salaries & Expenses	\$915.4	\$814.2	\$814.2	-\$35.0	\$779.2	\$782.6	\$3.4
Research & Development	\$236.6	\$400.0	\$368.7	-\$15.9	\$352.8	\$800.0	\$447.2
TOTAL	\$1,152.0	\$1,214.2	\$1,182.9	-\$50.9	\$1,132.0	\$1,582.6	\$450.6
Quality Assurance Management							
Salaries & Expenses	\$655.8	\$686.7	\$686.6	-\$29.5	\$657.1	\$809.1	\$152.0
Research & Development	\$638.2	\$426.7	\$424.7	-\$18.3	\$406.4	\$400.0	-\$6.4
TOTAL	\$1,294.0	\$1,113.4	\$1,111.3	-\$47.8	\$1,063.5	\$1,209.1	\$145.6
TOTAL:							
Salaries & Expenses	\$4,380.4	\$3,954.4	\$3,943.1	-\$169.4	\$3,773.7	\$3,873.1	\$99.4
Research & Development	\$22,175.7	\$14,900.0	\$21,742.8	-\$935.0	\$20,807.8	\$15,516.0	-\$5,291.8
Intermedia Programs TOTAL	\$26,556.1	\$18,854.4	\$25,685.9	-\$1,104.4	\$24,581.5	\$19,389.1	-\$5,192.4

## INTERDISCIPLINARY

## Intermedia Programs

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
PERMANENT WORKYEARS							
-----							
Technical Information & Liaison	22.7	17.0	16.8		16.8	16.8	
Exploratory Research Core Program - Interdisciplinary	16.5	10.0	9.9		9.9	9.9	
Scientific Assessment Interdisciplinary	14.6	16.0	16.0		16.0	14.4	-1.6
Quality Assurance Management	9.0	13.2	13.2		13.2	13.2	
TOTAL PERMANENT WORKYEARS	62.8	56.2	55.9		55.9	54.3	-1.6
TOTAL WORKYEARS							
-----							
Technical Information & Liaison	28.0	28.6	28.4		28.4	28.4	
Exploratory Research Core Program - Interdisciplinary	16.8	10.0	9.9		9.9	9.9	
Scientific Assessment Interdisciplinary	16.0	16.0	16.0		16.0	14.4	-1.6

# INTERDISCIPLINARY

## Intermedia Programs

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
Quality Assurance Management	9.7	13.6	13.6		13.6	13.6	
TOTAL WORKYEARS	70.5	68.2	67.9		67.9	66.3	-1.6

## INTERDISCIPLINARY

### Intermedia Programs

#### Principal Outputs by Objective

##### 1987 PLANNED OUTPUTS

=====

##### Objective 1: Assure Uniform Risk Assessment

- o Two technical support documents for exposure assessment guidelines (Scientific Assessments)
- o Final guidelines for health assessment of toxicants to male/female reproductive system (Scientific Assessments)

##### Objective 3: Technology Transfer

- o Seminars to assist states in the regulation of toxic pollutants in air (Technical Information)
- o Seminars on technologies available for beneficial use of municipal sludges (Technical Information)

##### Objective 4: Manage the Agency-wide Mandatory Quality Assurance Program

- o Report on review of Agency Quality Assurance program plans (annual work plans and revised management plans from 42 offices and laboratories) (QA Management)
- o Guidance on audits of data quality for environmental data collection activities (QA Management)

##### Objective 5: Manage/Implement the Exploratory Grants and Centers Program

- o Solicitation for 1988 Research Grants Proposals (Exploratory Research)
- o Annual Reports on Research Grants and Centers Program (Exploratory Research)
- o Bibliography of Research Grant Published Articles (Exploratory Research)

##### Objective 6: Manage/Implement the Environmental Trends Program

- o Status reports on U.S. Mussel Watch and Specimen Bank Programs (Exploratory Research)

##### Objective 7: Manage/Implement the Visiting Scientists Program

- o Solicit and select distinguished scientists for 1988 program (Exploratory Research)

##### 1986 PLANNED OUTPUTS

=====

##### Objective 1: Assure Uniform Risk Assessment

- o Proposed guidelines for assessment of pollutant effects on human fertility (Scientific Assessment)
- o Final guidelines for chemical mixtures, carcinogen risk assessment, exposure assessment, mutagenicity risk assessment, and suspect developmental toxicants health assessment (Scientific Assessment)

### Objective 3: Technology Transfer

- o Trial Burn Data Handbook for hazardous waste incinerator permit writers (Technical Information)
- o Seminars on the technologies available to decrease contaminant levels contained in the Office of Drinking Water Health Advisories (Technical Information)

### Objective 4: Manage the Agency-wide Mandatory Quality Assurance Program

- o Report on continuing review of all Agency Quality Assurance program plans (42 offices and laboratories) (QA Management)

### Objective 5: Manage/Implement the Exploratory Grants and Centers Program

- o Solicitation for 1987 Research Grant Proposals (Exploratory Research)
- o Annual reports on the Research Grants and Centers Programs (Exploratory Research)

### Objective 6: Manage/Implement the Environmental Trends Program

- o Status Reports on Mussel Watch and Specimen Bank programs (Exploratory Research)

### Objective 7: Manage/Implement the Visiting Scientists Program

- o Solicit and select scientists for 1987 Visiting Scientists Program (Exploratory Research)

## 1985 ACTUAL OUTPUTS

=====

### Objective 1: Assure Uniform Risk Assessment

- o Proposed guidelines for chemical mixtures, carcinogen risk assessment, exposure assessment, mutagenicity risk assessment, and suspect developmental toxicants health assessment (Scientific Assessment)

### Objective 3: Technology Transfer

- o Revision of handbook for remedial action at waste disposal sites (Technical Information)
- o Teleconference on emergency plans for the protection of public drinking water supplies (Technical Information)

### Objective 4: Manage the Agency-wide Mandatory Quality Assurance Program

- o Report on management systems audits of two Agency components (QA Management)
- o Guidance for revised Quality Assurance program plans for all Agency data collection components (QA Management)

### Objective 5: Manage/Implement the Exploratory Grants and Centers Program

- o Awarded 57 research grants (Exploratory Research)
- o Received over 200 research papers (Exploratory Research)

### Objective 6: Manage/Implement the Environmental Trends Program

- o Mussel Watch research plan (Exploratory Research)

### Objective 7: Manage/Implement the Visiting Scientists Program

- o Selected 9 visiting scientists for the Visiting Scientists Program (Exploratory Research)



## INTERDISCIPLINARY

### Intermedia Programs

#### Budget Request

The Agency requests a total of \$19,389,100 supported by 66.3 total workyears for 1987, a decrease of \$5,192,400 and a decrease of 1.6 total workyears from 1986. Of the request, \$3,873,100 will be for the Salaries and Expenses appropriation and \$15,516,000 will be for the Research and Development appropriation.

#### Program Description

The Intermedia budget subactivity consists of those ORD programs which cross all media. These are Exploratory Research, Technical Information and Liaison, Quality Assurance Management, and Uniform Risk Assessment.

Objective 1: Assure Uniform Risk Assessment. This activity provides Agency-wide guidance to perform exposure and risk assessments. These guidelines are intended to ensure uniform assessments that rely on sound scientific principles and information.

Objective 2: Technical Information Product Management. This program manages the development of ORD's scientific and technical information products to ensure they are properly and efficiently planned, controlled, distributed and of high quality. This program also develops special reports as needed, supports the review of Technical Information Plans, and enforces technical information standards for ORD information products.

Objective 3: Technology Transfer. These activities support the Stevenson-Wydler Technology Innovation Act (P.L. 96-480). By providing information on available technology and technical data, states and localities are more able to meet their regulatory responsibilities.

Objective 4: Manage the Agency-wide Mandatory Quality Assurance Program. This program provides policy direction, management systems and technical guidelines for the Agency-wide mandatory quality assurance program.

Objective 5: Manage/Implement the Exploratory Grants and Centers Program. The grants program funds individual investigator-initiated research in areas of concern to the Agency through an open, competitive, peer-reviewed evaluation process. The long-term exploratory research centers will focus on multi-disciplinary research in eight topic areas. In addition, the Small Business Innovation Research program, the Senior Environmental Employment Program and the Minority Institutions Support Program are managed under this objective.

Objective 6: Manage/Implement the Environmental Trends Program. This program develops biomonitoring techniques, such as Mussel Watch and the National Pilot Specimen Bank, to identify long-term environmental trends and research needs.

Objective 7: Manage/Implement the Visiting Scientists Program. This objective develops and implements programs to strengthen and enhance the quality of the Agency's research programs through the exchange of scientists and the granting of awards for scientific achievement. The major activity is the senior Visiting Scientists program, which enables accomplished scientists to conduct research at ORD laboratories.

## TECHNICAL INFORMATION AND LIAISON

### 1987 Program Request

The Agency requests a total of \$2,459,400 supported by 28.4 total workyears for this program, of which \$1,743,400 will be for the Salaries and Expenses appropriation and \$716,000 will be for the Research and Development appropriation. This represents an increase of \$33,500 and a decrease of \$38,900, respectively, and no change in total workyears. The increase in Salaries and Expenses reflects adjustments to the 1986 base as part of government-wide deficit reductions. The decrease in Research and Development reflects a reduction in technology transfer activities in order to support other research priorities.

Technical Information Product Management. In 1987, the Center for Environmental Research Information (CERI) will continue to be the central point for all ORD information products. It will track, process, and distribute all ORD reports, develop special reports as needed, produce all ORD project summaries and review them for policy implications. Responsibilities will continue to fall into three major categories: processing reports and journal articles to NTIS; reviewing, processing, and controlling the quality of project summaries; and printing and distributing ORD information products. In 1987, CERI estimates it will receive a slightly higher number of reports for processing to NTIS (1,700). Of these, there will be approximately 1,074 project reports, 520 journal articles and 106 miscellaneous documents.

These activities will ensure that ORD's scientific and technical information products are planned, appropriately controlled, distributed uniformly, and of high quality.

Technology Transfer. Technology Transfer is a continuing responsibility. In response to requests from the EPA program offices and the needs expressed by the regions and the States, ORD disseminates the available technology and technical data to States and localities to enable them to meet their regulatory responsibilities. In 1987, Technology Transfer activities will be carried out in support of the Stevenson-Wydler Technology Innovation Act. Activities will include the design, production, quality control, and distribution of materials such as design manuals, users' guides, handbooks, and workshops.

### 1986 Program

In 1986, the Agency is allocating a total of \$2,464,800 supported by 28.4 total workyears for this program, of which \$1,709,900 is from the Salaries and Expenses appropriation and \$754,900 is from the Research and Development appropriation.

The Center for Environmental Research Information (CERI) tracks, processes and distributes all ORD reports, develops special reports as needed and produces all ORD project summaries. Technology transfer activity supports the production of technology transfer tools for the Program Offices and the Regions.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,854,100 supported by 28.0 total workyears for this program, of which \$1,948,400 was from the Salaries and Expenses appropriation and \$905,700 was from the Research and Development appropriation.

Major accomplishments in 1985 included a Teleconference on Emergency Plans for the Protection of Public Drinking Water Supplies. In addition, several other technology transfer manuals and handbooks were completed and 21 seminars and workshops on 6 subjects were conducted. Over 1,300 documents were processed to the National Technical Information Service, 389 project summaries were produced and distributed, and over 26,000 requests for publications were answered.

## EXPLORATORY RESEARCH CORE PROGRAM

### 1987 Program Request

The Agency requests a total of \$14,138,000 supported by 9.9 total workyears for this program, of which \$538,000 will be for the Salaries and Expenses appropriation and \$13,600,000 will be for the Research and Development appropriation. This represents a decrease of \$89,500 and \$5,693,700, respectively, and no change in total workyears. As in previous years, these reductions reflect a difference in the way that resources for the Small Business Innovation Research (SBIR) grant program are accounted for between the current year (1986) and the budget year (1987). The 1986 resources for SBIR have been consolidated in the Exploratory Research Core Program, whereas the 1987 resources are distributed to each of the media research programs. After the beginning of 1987 these resources will be consolidated in the Exploratory Research Core Program. In addition, the number of new grants awarded under the Exploratory Grants program will be reduced in order to focus resources on high priority research areas.

Manage/Implement the Exploratory Grants and Centers Program. Applications from individual investigators will continue to be received, peer reviewed and reviewed for relevance to EPA's mission. The program will emphasize: continued improvement in quality of research; coordination with the Agency's research planning process; broad dissemination of results of completed grants, and coordination with other Federal agencies. Seminars and workshops featuring the completed work of grantees will continue to be held in Agency laboratories and other locations around the country. Invitees will include interested Agency staff, peer review panelists, other grantees, science media, the general public, representatives from other Federal granting entities and interested State and local personnel.

Oversight and management of the operating centers will emphasize attention to new trends, discoveries or leads coming from ongoing studies. An annual summary report of the results obtained by each of the centers will be prepared for ongoing evaluation of the effectiveness of the center with respect to coverage of necessary areas or ability to respond to new needs. Recommendations for reorienting existing centers will be prepared when appropriate. Symposia and workshops will be held to disseminate information from center studies.

Manage/Implement the Environmental Trends Program. These resources will continue to support biomonitoring activities which include the Mussel Watch and Specimen Bank programs at the 1986 level. The U.S. Mussel Watch program is developing methods to measure the environmental status of coastal marine waters. The National Pilot Specimen Bank is developing ways to allocate, analyze and store samples of environmental concern. Both of these programs are essential components of the Agency's comprehensive long range research strategy.

Manage/Implement the Visiting Scientists Program. This program, designed to enable distinguished scientists to work in ORD laboratories, will continue as in 1986. The scientists who participate in research activities will be renowned in their fields. The Distinguished Visiting Scientists Program is ongoing and, therefore, the activities and expected accomplishments for 1987 are similar to those for 1986. Involvement of renowned scientists in the day-to-day activities of ORD laboratories will result in exchanges of information beneficial to both EPA and the scientific community and will improve the reputation and credibility of research carried out in EPA laboratories.

### 1986 Program

In 1986, the Agency is allocating a total of \$19,921,200 supported by 9.9 total workyears for this program, of which \$627,500 is from the Salaries and Expenses appropriation and \$19,293,700 is from the Research and Development appropriation.

The 1986 Grants and Centers Program is continuing to award research grants and manage the academic research centers to support the Agency's long-term research needs. In addition, the environmental trends program, encompassing the U.S. Mussel Watch and the National Pilot Specimen Bank, is continuing to assist the Agency in monitoring environmental trends to better anticipate emerging environmental problems and develop strategies to address them. The Distinguished Visiting Scientists Program is continuing to enable outside scientists to either consult with or conduct research in ORD laboratories.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$21,256,000 supported by 16.8 total workyears for this program, of which \$860,800 was from the Salaries and Expenses appropriation and \$20,395,200 was from the Research and Development appropriation.

In 1985, the Exploratory Research program reviewed 414 grant proposals and awarded 57 new grants and 57 continuations. The Visiting Scientists program sponsored the work of nine distinguished scientists in ORD laboratories, enabling the agency to remain in the forefront of science and strengthening EPA's scientific basis for regulatory decisions.

#### SCIENTIFIC ASSESSMENT

##### 1987 Program Request

The Agency requests a total of \$1,582,600 supported by 14.4 total workyears for this program, of which \$782,600 will be for the Salaries and Expenses appropriation and \$800,000 will be for the Research and Development appropriation. This represents an increase of \$3,400 and \$447,200, respectively, and a decrease of 1.6 total workyears. The increases reflect the need for further development of guidelines and support for methods development needs identified by the Risk Assessment Forum or during the preparation of existing guidelines.

Assure Uniform Risk Assessment. In 1987 this program will submit for public comment and SAB review guidelines for health assessment of toxicants to the male/female reproductive system. Two technical support documents for exposure assessment guidelines will be completed and guidelines for systemic toxicants will be proposed.

Funds will be used to operate the Risk Assessment Forum, which ensures appropriate agency-wide consistency in procedures by reviewing program office risk assessments, making recommendations for risk assessment procedures not covered by established guidelines, making recommendations on risk assessment issues, and recommending revisions to agency guidelines whenever necessary. All Forum-directed projects will be coordinated with, and complement, other Agency efforts to reduce risk assessment uncertainties.

##### 1986 Program

In 1986, the Agency is allocating a total of \$1,132,000 supported by 16.0 total workyears for this program, of which \$779,200 is from the Salaries and Expenses appropriation and \$352,800 is from the Research and Development appropriation.

In 1986 guidelines in areas including carcinogenicity, mutagenicity, reproductive effects, systemic effects, complex mixtures and exposure assessment are being completed, concluding the first round of risk assessment guidelines. The Agency's Risk Assessment Forum is continuing to review risk assessments at the request of senior management, as well as provide the Agency with revised and updated guidelines for producing risk assessments.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,152,000 supported by 16.0 total workyears for this program, of which \$915,400 was for the Salaries and Expenses appropriation and \$236,600 was for the Research and Development appropriation.

Guidelines for risk assessment and exposure assessment documents were submitted for public comment and SAB review. These guidelines, on carcinogenicity, mutagenicity, chemical mixtures, developmental toxicants and exposure, were re-drafted, given provisional SAB approval and await final SAB approval.

### QUALITY ASSURANCE MANAGEMENT

#### 1987 Program Request

The Agency requests a total of \$1,209,100 supported by 13.6 total workyears for this program, of which \$809,100 will be for the Salaries and Expenses appropriation and \$400,000 will be for the Research and Development appropriation. This represents an increase of \$152,000 and a decrease of \$6,400, respectively, and no change in total workyears. The increase in Salaries and Expenses reflects enhanced support to the in-house research program and increased efforts in support of the full scale auditing program for the Agency's Quality Assurance systems.

Manage the Agency-wide Mandatory Quality Assurance Program. In 1987, all program offices, Regional offices and Agency laboratories must continue to implement quality assurance (QA) procedures consistent with Agency policy to ensure that data generated by the Agency are reliable, valid, and accurate. This program will include review of QA program plans of all regions, program offices and laboratories; QA management system audits of selected EPA offices and laboratories; selected reviews of audits performed by Agency Quality Assurance Officers; development and improvement of program-specific guidance for QA project plans; preparation of a QA status report for senior EPA management; and development of procedures for training QA officers and data collectors on the use of QA materials.

#### 1986 Program

In 1986, the Agency is allocating a total of \$1,063,500 supported by 13.6 total workyears for this program, of which \$657,100 is from the Salaries and Expenses appropriation and \$406,400 is from the Research and Development appropriation.

In 1986, the quality assurance activity involves the implementation and evaluation of programs to support the development within EPA of scientific data of known and acceptable quality.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,294,000 supported by 9.7 total workyears for this program, of which \$655,800 was from the Salaries and Expenses appropriation and \$638,200 was from the Research and Development appropriation.

In 1985 the quality assurance activity involved planning for conducting management systems audits of the regions, program offices and laboratories; developing guidance for revised quality assurance program plans for all Agency data collection activities, reviews of Agency quality assurance audits; and development of guidance for data quality objectives.



# **Abatement and Control**





ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# INTERDISCIPLINARY

## Environmental Review and Coordination

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
-----								
(DOLLARS IN THOUSANDS)								
PROGRAM								
-----								
Environmental Review and Coordination								
Salaries & Expenses	\$4,965.9	\$5,175.7	\$4,927.4	-\$211.8	\$4,715.6	\$4,851.1	\$135.5	
Abatement Control and Compliance	\$5,492.8	\$5,104.0	\$5,154.0	-\$221.7	\$4,932.3	\$3,078.4	-\$1,853.9	
TOTAL	\$10,458.7	\$10,279.7	\$10,081.4	-\$433.5	\$9,647.9	\$7,929.5	-\$1,718.4	
TOTAL:								
Salaries & Expenses	\$4,965.9	\$5,175.7	\$4,927.4	-\$211.8	\$4,715.6	\$4,851.1	\$135.5	
Abatement Control and Compliance	\$5,492.8	\$5,104.0	\$5,154.0	-\$221.7	\$4,932.3	\$3,078.4	-\$1,853.9	
Environmental Review and Coordination	TOTAL	\$10,458.7	\$10,279.7	\$10,081.4	-\$433.5	\$9,647.9	\$7,929.5	-\$1,718.4
PERMANENT WORKYEARS								
-----								
Environmental Review and Coordination	118.5	111.0	112.2		112.2	108.5	-3.7	
TOTAL PERMANENT WORKYEARS	118.5	111.0	112.2		112.2	108.5	-3.7	

# INTERDISCIPLINARY

## Environmental Review and Coordination

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
TOTAL WORKYEARS							
-----							
Environmental Review and Coordination	124.7	118.2	118.2		118.2	114.5	-3.7
TOTAL WORKYEARS	124.7	118.2	118.2		118.2	114.5	-3.7

## INTERDISCIPLINARY

### Environmental Review and Coordination

#### Budget Request

The Agency requests a total of \$7,929,500 supported by 114.5 total workyears for 1987, a decrease of \$1,718,400 and 3.7 total workyears from 1986. Of this request, \$4,851,100 will be for the Salaries and Expenses appropriation and \$3,078,400 will be for the Abatement, Control and Compliance appropriation, an increase of \$135,500 and a decrease of \$1,853,900 respectively.

#### Program Description

Environmental Review and Coordination -- This activity includes four programs. National Environmental Policy Act (NEPA) Compliance contains resources for preparing EPA's Environmental Impact Statements (EISs) or, alternatively, determining Findings of No Significant Impact (FNSIs) on National Pollution Discharge Elimination System (NPDES) new source permits and municipal wastewater treatment grant actions to assure that new facilities with Federal involvement comply with NEPA. The NEPA Compliance program also provides assistance to other EPA programs in conducting functionally equivalent analyses.

Federal Facilities Compliance deals with control of pollution at Federal installations. Under Executive Order 12088, EPA is directed to: (1) provide technical advice and assistance to Federal agencies to ensure that their facilities comply with pollution control requirements in a cost effective and timely manner; (2) assist Federal agencies and the Office of Management and Budget (OMB) in developing budgetary plans for controlling pollution at Federal facilities; and (3) resolve disputes regarding Federal facilities' violations of pollution control requirements through administrative mechanisms. The Federal Facility compliance effort is a comprehensive multi-media program which works with and coordinates the individual single-media programs to establish one integrated and focused effort, enabling EPA to deal with other Federal agencies on their pollution control problems in a highly efficient and effective manner, and not through fragmented, single-media approaches.

Pursuant to NEPA and Section 309 of the Clean Air Act, the Environmental Review program reviews and comments publicly on the environmental impact of proposed projects, regulations, and other major Federal actions. This broad mandate encourages expedited environmental assessment of all Federal projects and activities. The major objective is to minimize the adverse environmental impacts of Federal proposals by: (1) effective liaison with other Federal agencies, (2) early identification of significant environmental issues, and (3) timely review of major actions.

The Indian Program coordinates the extension of EPA programs to American Indian reservations. This effort emphasizes coordination of Agency activities and support of activities designed to improve the environmental management capability of tribal governments. It includes identification of, and work on, priority tribal projects and resolution of legal, policy, and procedural problems hampering EPA's ability to work with tribal governments.

#### ENVIRONMENTAL REVIEW AND COORDINATION

##### 1987 Program Request

The Agency requests a total of \$7,929,500 supported by 114.5 total workyears for this program, of which \$4,851,100 will be for the Salaries and Expenses appropriation and \$3,078,400 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$135,500 in Salaries and Expenses, a decrease of \$1,853,900 in Abatement, Control and Compliance, and a decrease of 3.7 total workyears. The increase is for increased support costs and the decrease reflects a reduction in NEPA compliance activity.

Efforts will continue to be directed toward ensuring that EPA complies with its NEPA requirements. In 1987, the Agency expects a decline in NEPA compliance activity, as only ongoing construction grant projects will be funded in 1987. The request includes only those extramural resources necessary to complete ongoing projects and to support analyses for phased, segmented projects. The request supports expected increases in the NPDES area due to the issuance of new source performance standards for oil and gas production facilities on the Outer Continental Shelf. An increase in the demand for NEPA compliance resources in conducting functionally equivalent analyses, particularly in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Toxic Substances Control Act (TSCA) areas is also expected.

The Agency will place increased emphasis on advice to Federal agencies on pollution control methods and requirements, compliance monitoring, and dispute resolution under Executive Order 12088. Particular emphasis will be placed on hazardous waste problems on Federal installations in cooperation with the Office of Solid Waste and Emergency Response. The Agency will continue to review and comment on draft and final EISs and improve coordination with other Federal agencies with respect to the Section 309 and NEPA review processes. Finally, the Agency will strengthen overall "outreach" with tribal groups. The office will continue implementation of the Agency's Indian program, through technical support and consultation designed to strengthen the environmental management capabilities of tribal governments. Principal emphasis will be placed on evaluating prototype technical and institutional solutions to environmental problems on tribal lands.

#### 1986 Program

In 1986, the Agency is allocating a total of \$9,647,900 supported by 118.2 total workyears for this program, of which \$4,715,600 is from the Salaries and Expenses appropriation and \$4,932,300 is from the Abatement, Control and Compliance appropriation. In 1986, the NEPA Compliance program is increasing emphasis on oversight of State programs which are doing much of the basic environmental analysis. EPA is also continuing work on site-specific assessments and EISs, and increasing efforts in conducting functionally equivalent analyses especially in the hazardous and toxic waste areas. The Agency is continuing to assist Federal agencies in identifying facilities needing pollution controls, determining the most cost effective control, and resolving disputes surrounding facilities which are out of compliance. The Agency is also continuing to work on the review of environmental impacts of proposed projects, regulations, and other major Federal actions, as required by both the NEPA and Section 309. The major objective is to minimize the adverse environmental impacts of Federal proposals by: (1) effective liaison with other Federal agencies; (2) early identification of significant environmental issues; and (3) timely review of major actions. In 1986, the program is working to improve the environmental management capability of tribal governments, which includes increased outreach and technical assistance to tribal governments and resolution of legal, policy, and procedural problems hampering EPA's ability to work with tribal governments.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$10,458,700 supported by 124.7 work-years for this program, of which \$4,965,900 was from the Salaries and Expenses appropriation and \$5,492,800 was from the Abatement, Control and Compliance appropriation. In 1985, this program consisted of two program elements, NEPA Compliance and Federal Facilities Compliance. The NEPA Compliance program prepared EISs and FNSIs as required in connection with construction grants and NPDES projects; conducted overviews of related state activities; and provided assistance

to other programs in conducting functionally equivalent analyses. The Agency continued its efforts to provide technical advice and assistance to Federal agencies to ensure that their facilities comply with pollution control requirements in a cost effective manner; to review and comment on proposed actions of other Federal agencies' actions to ensure that public health and the environment was protected; to improve liaison with other Federal agencies, and to identify and resolve environmental concerns on Indian lands. In 1985, the Agency adopted and began implementation of an Indian Policy.

# INTERDISCIPLINARY

## Interdisciplinary Training Grants

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
Interdisciplinary Training Grants Abatement Control and Compliance	\$458.4		\$550.0	-\$23.7	\$526.3		-\$526.3
TOTAL	\$458.4		\$550.0	-\$23.7	\$526.3		-\$526.3
TOTAL: Abatement Control and Compliance	\$458.4		\$550.0	-\$23.7	\$526.3		-\$526.3
Interdisciplinary Training Grants			\$550.0	-\$23.7	\$526.3		-\$526.3
TOTAL	\$458.4		\$550.0	-\$23.7	\$526.3		-\$526.3

## INTERDISCIPLINARY

### Interdisciplinary Training Grants

#### Budget Request

The Agency requests no resources for this activity in 1987.

#### Program Description

This program encouraged academic training in the environmental sciences by providing economic support, through fellowships and training grants, to students who are interested in entering this field. This program is being phased out in 1986.

#### INTERDISCIPLINARY TRAINING GRANTS

##### 1987 Program Request

The Agency is not requesting funding for this activity in 1987.

##### 1986 Program

In 1986, the Agency is allocating a total of \$526,300 for this program within the Office of Research and Development (ORD), all of which is for the Abatement, Control and Compliance appropriation. Resources are being used to begin the phase-out of this program.

##### 1985 Accomplishments

In 1985, the Agency obligated a total of \$458,400 to this program within the Office of Research and Development all of which was for the Abatement, Control and Compliance appropriation. The program funded 41 minority fellowships.



# INTERDISCIPLINARY

## Interdisciplinary Technical Assistance

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
EPA Disaster Assistance							
Salaries & Expenses	\$10.0						
TOTAL	\$10.0						
TOTAL:							
Salaries & Expenses	\$10.0						
Interdisciplinary							
Technical Assistance							
TOTAL	\$10.0						
PERMANENT WORKYEARS							
-----							
EPA Disaster Assistance	.2						
TOTAL PERMANENT WORKYEARS	.2						
TOTAL WORKYEARS							
-----							
EPA Disaster Assistance	.2						
TOTAL WORKYEARS	.2						



# **Enforcement**



ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# INTERDISCIPLINARY

## Enforcement Policy & Technical Support

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
-----								
(DOLLARS IN THOUSANDS)								
-----								
PROGRAM								
-----								
Technical Support								
Office of Enforcement								
And Compliance								
Monitoring								
Salaries & Expenses	\$3,478.3	\$3,277.9	\$3,137.0	-\$134.7	\$3,002.3	\$3,064.1	\$61.8	
Abatement Control and Compliance	\$1,547.6	\$1,705.3	\$1,705.3	-\$73.4	\$1,631.9	\$1,705.3	\$73.4	
TOTAL	\$5,025.9	\$4,983.2	\$4,842.3	-\$208.1	\$4,634.2	\$4,769.4	\$135.2	
Enforcement Policy & Operations								
Salaries & Expenses	\$12,671.4	\$12,699.0	\$13,796.4	-\$593.2	\$13,203.2	\$13,475.4	\$272.2	
Abatement Control and Compliance	\$309.4	\$350.0	\$350.0	-\$15.1	\$334.9	\$350.0	\$15.1	
TOTAL	\$12,980.8	\$13,049.0	\$14,146.4	-\$608.3	\$13,538.1	\$13,825.4	\$287.3	
Criminal Investigation Program								
Salaries & Expenses			\$966.8	-\$41.6	\$925.2	\$1,961.5	\$1,036.3	
TOTAL			\$966.8	-\$41.6	\$925.2	\$1,961.5	\$1,036.3	
TOTAL:								
Salaries & Expenses	\$16,149.7	\$15,976.9	\$17,900.2	-\$769.5	\$17,130.7	\$18,501.0	\$1,370.3	
Abatement Control and Compliance	\$1,857.0	\$2,055.3	\$2,055.3	-\$88.5	\$1,966.8	\$2,055.3	\$88.5	
Enforcement Policy & Technical Support	TOTAL	\$18,006.7	\$18,032.2	\$19,955.5	-\$858.0	\$19,097.5	\$20,556.3	\$1,458.8

# INTERDISCIPLINARY

## Enforcement Policy & Technical Support

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
-----							
PERMANENT WORKYEARS							
-----							
Technical Support Office of Enforcement And Compliance Monitoring	49.7	66.4	65.4		65.4	62.5	-2.9
Enforcement Policy & Operations	251.3	257.4	279.2		279.2	284.0	4.8
Criminal Investigation Program			25.0		25.0	35.0	10.0
TOTAL PERMANENT WORKYEARS	301.0	323.8	369.6		369.6	381.5	11.9
TOTAL WORKYEARS							
-----							
Technical Support Office of Enforcement And Compliance Monitoring	61.5	66.4	65.4		65.4	62.5	-2.9
Enforcement Policy & Operations	276.1	268.7	291.7		291.7	291.7	
Criminal Investigation Program			25.0		25.0	35.0	10.0
TOTAL WORKYEARS	337.6	335.1	382.1		382.1	389.2	7.1

## INTERDISCIPLINARY

### Enforcement Policy and Technical Support

#### Budget Request

The Agency requests a total of \$20,556,300 supported by 389.2 total work-years for 1987, an increase of \$1,458,800 and 7.1 total workyears from 1986. Of the request \$18,501,000 will be for the Salaries and Expenses appropriation and \$2,055,300 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$1,370,300 in the Salaries and Expenses appropriation and \$88,500 in the Abatement, Control and Compliance appropriation.

#### Program Description

The program areas under this subactivity include:

Technical Support - Office of Enforcement and Compliance Monitoring -- The National Enforcement Investigations Center (NEIC) provides Headquarters and Regional Offices with technical support for litigation development in nationally managed cases; cases with precedential implications; criminal cases; cases with multi-Regional impacts; cases involving unique technological requirements and complexity; and cases which exceed a Region's capability and resources. NEIC plans, develops, and provides technical assistance for civil and criminal cases under all statutes administered by the Agency.

Enforcement Policy and Operations -- This program element provides the legal enforcement and compliance monitoring component of Agency enforcement programs in all non-Superfund media. The Headquarters component is responsible for implementation of all aspects of legal enforcement activities in which EPA is a plaintiff and provision of consistent direction and coordination of Agency legal enforcement policies, strategies, and case development activities. In addition, the Headquarters component is responsible for oversight of the Agency's compliance efforts, including establishment of Agencywide criteria for use in the development of media-specific compliance strategies, the negotiation of compliance and enforcement commitments, and the overview of the implementation of strategies and program objectives. The Office of Enforcement and Compliance Monitoring conducts cross-media analyses of Agency compliance and enforcement activities and acts as a leader in fostering new compliance and enforcement approaches.

Regional legal resources are used to translate national priorities into a credible enforcement presence tailored to particular Regional characteristics and designed to maintain statutory compliance in the most cost-effective manner. Consultation is provided to Regional media program clients for development of effective compliance monitoring and enforcement strategies, including advice on strategies for use of administrative and judicial remedies. Emphasis is placed on timely and appropriate enforcement response to significant violations and management of ongoing caseload to achieve equitable resolution and swift return of violators to compliance. Cooperation with State enforcement agencies in pursuit of timely and appropriate enforcement remedies and maintenance of an effective Federal enforcement presence are important goals of this program.

Criminal Investigations -- This program element provides a nationally directed, Regionally implemented system for the investigation and swift prosecution of suspected criminal violators of environmental statutes. A significant objective of this program is to act as a deterrent to violation of environmental laws. The program is operated in close cooperation with comparable State activities, where they exist.



## TECHNICAL SUPPORT - OFFICE OF ENFORCEMENT AND COMPLIANCE MONITORING

### 1987 Program Request

The Agency requests a total of \$4,769,400 supported by 62.5 total workyears for this program, of which \$3,064,100 will be for the Salaries and Expenses appropriation and \$1,705,300 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$61,800 in the Salaries and Expenses appropriation, an increase of \$73,400 in the Abatement, Control and Compliance appropriation, and a decrease of 2.9 total workyears from 1986. The increases reflect increased technical support costs. The decrease in workyears reflects a shift to the criminal investigation program.

This program element covers the activities of the National Enforcement Investigations Center (NEIC) with respect to support of all non-Superfund enforcement actions. In 1987, NEIC will continue to provide case development support in nationally managed cases having precedential implications, unique technological requirements and complexity, multi-Regional impacts, and resource requirements exceeding Regional capabilities. NEIC will continue implementation of rigorous technical compliance monitoring procedures particularly with respect to groundwater contamination, air toxics, and municipal and pretreatment compliance. Efforts will continue to improve technical support to investigations and case preparation through greater access to appropriate data bases, and improved technical investigative and evidence audit support. Improved procedures for the development of cases under the Safe Drinking Water Act with particular emphasis upon protection and restoration of groundwater supplies and imminent and substantial endangerment cases under Sec. 1431 will be instituted. Emphasis will be placed on case file development and evidence audits. Priority will be afforded to investigations, cases, and remedial actions having potential for a high degree of environmental improvement. NEIC will also continue to provide technical leadership in executing field and laboratory data analyses in support of special studies involving crossmedia geographic initiatives.

### 1986 Program

In 1986, the Agency is allocating a total of \$4,634,200 supported by 65.4 total workyears for this program, of which \$3,002,300 is from the Salaries and Expenses appropriation and \$1,631,900 is from the Abatement, Control and Compliance appropriation.

In 1986, NEIC's operations include the following support to media specific activities: support to civil and criminal cases potentially leading to Resource Conservation and Recovery Act (RCRA) prosecutions; development of computerized information searches for RCRA preliminary investigations, and extensive laboratory support to RCRA investigations; audit of contract performance of major Department of Defense contractors engaged in hazardous waste transportation and disposal; and provision of expert testimony in cases developed in prior years. NEIC also provides technical support in the effort to gain control of the illegal blending of hazardous wastes with domestic fuel oil burned in low temperature boilers.

NEIC support to enforcement of the Clean Water Act in 1986 involves laboratory analysis and technical expert testimony for civil and criminal actions; conduct of technical information searches for Regional investigations; support of groundwater protection by providing laboratory analysis, strategy, and policy reviews; conduct of evidence audits in support of the pretreatment initiative; provision of technical leadership in cases of large, complex municipal treatment facilities which are malfunctioning or failing to meet permit limitations; and support of field studies required by special crossmedia geographic initiatives.

NEIC support to the Clean Air Act enforcement program during 1986 includes laboratory support to enforcement cases; computerized information searches; auto tampering investigations; and laboratory support to the mobile source lead-in-gas program.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$5,025,900 supported by 61.5 total workyears for this program, of which \$3,478,300 was from the Salaries and Expenses appropriation and \$1,547,600 was from the Abatement, Control and Compliance appropriation.

In all statutory areas, case preparation activities and technical support to enforcement actions against significant violators were provided. Particular emphasis was placed on support to the RCRA program, including auditing contractor performance on hazardous waste transportation and disposal, and work on illegal fuel blending. Emissions monitoring protocols and requirements were developed and testing for violations of National Emission Standards for Hazardous Air Pollutants continued. Tampering and defect surveys were conducted. Substantial increases were provided in support to mobile source enforcement. The NEIC provided compliance evaluations, performance audit inspections, multi-media inspections, and evaluations of major publicly owned treatment works suspected of noncompliance, as well as Clean Water Act case support. Technical assistance was also provided to the pesticides and toxics enforcement efforts, with particular emphasis on PCB's and management of Confidential Business Information in TSCA case preparation.

#### ENFORCEMENT POLICY AND OPERATIONS

##### 1987 Program Request

The Agency requests \$13,825,400 supported by 291.7 total workyears for this program, of which \$13,475,400 will be for the Salaries and Expenses appropriation and \$350,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$272,200 in Salaries and Expenses and \$15,100 in Abatement, Control and Compliance. There is no change in workyears. The increases reflect support to accelerated enforcement activity including additional support to swift and effective resolution of the ongoing judicial and administrative caseloads.

At Headquarters, emphasis will be placed on development and use of enforcement strategies which capture, where possible, the benefits of cross-media geographic initiatives, with particular attention to hazards most threatening to long term public health (eg. hazardous waste disposal, toxic substances and groundwater protection). Legal enforcement resources will be devoted to continued policy development, management of nationally significant cases and review of major judicial enforcement actions to insure national consistency of Agency policy and statutory interpretation. As in 1985 and 1986, Headquarters will continue expansion of its program of direct referral of certain classes of cases to the Department of Justice, to avoid any duplicative review. Monitoring and assessment of the implementation of enforcement initiatives begun in 1985 and 1986 and adjustment or elaboration of policy guidance as needed will continue (e.g. monitoring State and Federal enforcement relationships, managing the Agency strategic planning process for compliance and enforcement programs for all media, further testing of alternative dispute resolution techniques).

Headquarters will continue support to Regions in management of new and ongoing litigation through policy interpretation, selective participation in critical national cases, and management of contract resources to provide expert witnesses for resolution of civil litigation. There will be continued implementation of compliance planning and evaluation functions, with emphasis on the design of enforcement strategies and initiatives and use of special studies to assess the current effectiveness of environmental enforcement. Performance measures which gauge Federal and State success in achieving environmental results will be refined. Additionally, stewardship of the Agency's information base on judicial enforcement activity and exploration of new and better ways to use that information base will continue.

The critical Regional concern in 1987 will be management of the ongoing docket, since the consequences of delay are grave for environmental quality, and the docket has grown in both size and complexity as a result of enforcement initiatives in 1985 and 1986. Lack of vigorous action by EPA to bring cases to closure is an open invitation to a well-informed regulated community to adopt delaying tactics which both prolong environmental harm and dilute deterrent impact.

Regional resources will have as their highest priorities in 1987 timely and appropriate response to newly detected statutory violations (primarily initiation of administrative or judicial actions against significant noncompliers) and swift and effective resolution of ongoing enforcement actions. Statutory priorities will include implementation of the reauthorized RCRA, particularly in corrective action (both administrative orders and permits), continued enforcement of the National Municipal and Pretreatment Policies, underground injection control permitting and enforcement, air toxics and the consequences of ozone nonattainment in 1987, asbestos demolition and PCB's. In addition, Regional resources will support the criminal investigation program by moving appropriate cases to swift prosecutorial action.

Significant energy will be devoted to continued participation in the State Enforcement Agreements operated for their first year in 1985, with particular attention paid to carrying through on the use of timely and appropriate enforcement actions.

#### 1986 Program

In 1986, the Agency is allocating a total of \$13,538,100 supported by 291.7 total workyears for this program, of which \$13,203,200 is from the Salaries and Expense appropriation and \$334,900 is from the Abatement, Control and Compliance appropriation.

The thrust of this program in 1986 is the maintenance of vigorous enforcement and compliance monitoring partnerships with the States, to produce maximum environmental results with the most effective combination of national policy direction and Regional line management. Activities at Headquarters include monitoring of the State-Federal partnership in enforcement of environmental laws; maintenance of the legal policy guidance and case management for the criminal investigation program; explicit articulation and updating of national enforcement priorities and legal enforcement policies for major media programs; development and implementation of enforcement strategies and initiatives; operation of the Strategic Planning and Management System for Agency enforcement operations; management reviews of enforcement performance; and support of Regional legal enforcement activities to insure equity of treatment for the regulated community and a firm national enforcement posture.

Regional legal enforcement resources are being devoted to resolution of ongoing judicial and administrative cases, generation of civil referrals most likely to improve environmental quality through returning significant violators to compliance, and maintaining a credible presence. Regional legal staff are working closely with media and State counterparts to select appropriate strategies and choice of enforcement tools. Legal time has been devoted to careful consultation early in the compliance monitoring and enforcement process to hasten positive outcomes and avoid protracted negotiation or litigation. The result has been generation of a high number of enforcement actions which promise major compliance payoffs. To capture these payoffs, a significant increase in Regional resources is being targeted to the resolution of ongoing caseload and effective enforcement of the reauthorized RCRA. Resources are generally shifting towards administrative enforcement, particularly in the complex areas of hazardous waste and toxics. Regional legal support is also provided to the criminal investigation program.

## 1985 Accomplishments

In 1985, the Agency obligated a total of \$12,980,800 supported by 276.1 total workyears for this program, of which \$12,671,400 was from the Salaries and Expenses appropriation and \$309,400 was from the Abatement, Control and Compliance appropriation.

The thrust of Headquarters resources in 1985 was further development and evaluation of enforcement and compliance monitoring strategies to produce maximum environmental results through the most effective combination of national policy direction -- Regional line management and collaboration with the States. Particular emphasis was given to policy development in areas of major statutory change, testing and expansion of new strategies to support effective case resolution, and clarification of methods for both clearly establishing enforcement goals and monitoring the status of statutory compliance nationwide. The year 1985 marked the inauguration of national operation of the criminal investigation program. This included outstationing of investigators in all ten Regions, under central direction at NEIC, coupled with legal policy guidance and case development support from Headquarters.

In 1985, Regional legal enforcement resources were devoted to vigorous judicial and administrative enforcement, with particular emphasis on generating civil referrals to bring significant noncompliers back into compliance and provide an effective deterrent. For the same reasons, active support was provided to prosecution of criminal cases in the first year of national operation of the criminal program. Substantial care was given to early consultation with media and State colleagues, to produce the most appropriate enforcement response. In addition, resources were used to support permit review and appeals in both the water and RCRA programs. In addition, considerable emphasis was placed on the continued operation of enforcement agreements with States which included clear articulation of timely and appropriate responses to violations and ground rules for Federal oversight.

## CRIMINAL INVESTIGATIONS PROGRAM

### 1987 Program Request

In 1987, the Agency requests a total of \$1,961,500 supported by 35.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$1,036,300 and 10.0 total workyears. This increase is to provide additional support for continued national operation of the program.

In 1987, the criminal investigation program will continue to operate as a national network, with particular emphasis on hazardous waste enforcement, in which area there is likely to be a significant increase in criminal activity due to the provisions of the reauthorized RCRA. The program will also stress close coordination with administrative and civil judicial enforcement initiatives, to maximize both the number of significant violators returned to compliance and the deterrent value of a Federal criminal enforcement presence. This program will continue to work closely with State criminal enforcement efforts, through the Northeast Hazardous Waste Coordinating Committee and the National Association of Attorneys General.

### 1986 Program

In 1986, the Agency is allocating a total of \$925,200 supported by 25.0 total workyears, all of which is from the Salaries and Expenses appropriation.

In 1986, the program, is continuing its second year in operation as a national enforcement presence. Approximately 60 percent of the program's emphasis is on violations of RCRA; the water program is next with about 20 percent of the Agency's investigations, followed by toxic substances 10 percent and air 10 percent. In

its second year, the program has capitalized on experience to improve on the 1985 ratio of 1 indictment in 5 investigations to approximately 1 in 3. As the courts have gained experience with cases of environmental crime, and are showing increased willingness to hand down significant fines and sentences, the program's importance as a deterrent is growing substantially.

#### 1985 Accomplishments

In 1985, this program was included under Enforcement Policy and Operations.



# **Toxic Substances**





ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# TOXIC SUBSTANCES

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
----- (DOLLARS IN THOUSANDS) -----							
APPROPRIATION							
-----							
Salaries & Expenses	\$38,770.3	\$39,888.9	\$39,859.9	-\$1,714.1	\$38,145.8	\$38,996.9	\$851.1
Abatement Control and Compliance	\$72,370.8	\$28,662.9	\$78,662.9	-\$3,382.6	\$75,280.3	\$28,875.7	-\$46,404.6
Research & Development	\$13,463.5	\$26,400.3	\$24,808.5	-\$1,066.4	\$23,742.1	\$21,455.1	-\$2,287.0
TOTAL, Toxic Substances	\$124,604.6	\$94,952.1	\$143,331.3	-\$6,163.1	\$137,168.2	\$89,327.7	-\$47,840.5
PERMANENT WORKYEARS	767.3	796.6	804.8		804.8	792.5	-12.3
TOTAL WORKYEARS	852.2	856.3	865.0		865.0	858.2	-6.8
OUTLAYS	\$84,562.6	\$94,151.1	\$125,687.4	-\$2,911.3	\$122,776.1	\$128,594.4	\$5,818.3
AUTHORIZATION LEVELS	Authorization for the Toxic Substances Control Act expired September 30, 1983, and reauthorization is pending						

## TOXIC SUBSTANCES

### OVERVIEW AND STRATEGY

Enacted in 1976, the Toxic Substances Control Act (TSCA) provides the Agency with a comprehensive set of authorities through which to deal with all aspects of a chemical's lifecycle. TSCA's provisions cover over 60,000 existing chemicals already in commerce when TSCA was passed and all new chemicals manufactured since the establishment of the TSCA Inventory of Chemical Substances in 1979.

Initially, the establishment of programs to evaluate the risks and benefits of new products took precedence over the establishment of programs to evaluate existing products. In 1984, the emphasis began to shift toward dealing with the many complex existing chemical problems. The existing chemicals review process has about 85 existing chemicals, as well as several existing chemical categories encompassing many more chemicals, in some stage of problem characterization, information gathering, risk assessment, or risk management.

The 1987 budget request continues to recognize the need to address risks posed by existing chemicals while maintaining an effective new chemical program. In 1987, six major activities will be emphasized; 1) reducing existing chemical risks, 2) crossmedia environmental problems, 3) addressing asbestos hazards, 4) new chemical reviews, 5) compliance monitoring of existing regulations, and 6) research and development.

#### Reduce Significant Risks From Existing Chemicals

The single overriding priority of the 1987 toxic substances program will be the emphasis given to reducing significant risks from existing chemicals. This emphasis is reflected in the Agency's 1987 priority list where the reduction of risks from existing pesticides and existing industrial chemicals is the highest priority. The Agency will address existing chemical problems using an EPA-wide multi-statute approach in which TSCA may in some cases be the key information gathering and analysis tool. In some cases, TSCA Section 6 or Section 9 may be the most effective authority to deal with the problem; in other cases, other EPA statutes may be the remedy of choice. In the toxic substances program, we will expand the category approach to all aspects of the existing chemical program--testing, information gathering, evaluation, and risk management. By looking at categories of existing chemicals, we can better address the risks of potential substitutes for problem chemicals, take actions that are equitable for all chemicals in that category (both new and existing), and reduce the backlog of existing chemicals awaiting action.

#### Support Important Cross-Media Environmental Problems

There will be greater use of TSCA to support regulations controlling human exposure to harmful chemicals taken under other programs. Consideration of the information gathering and analysis needs of other offices will be an integral part of TSCA activities. TSCA will support the Agency's groundwater efforts with emphasis on volatile organic compounds, fertilizers, and septic tank discharges. We will also continue support to the Agency's acutely toxic chemicals program by using TSCA authorities and providing chemical expertise to update the list of acutely toxic chemicals and chemical profiles published in 1986.

#### Address Hazards From Asbestos

The focus of the asbestos program in 1987 will be on providing technical assistance to school officials, abatement contractors, architects, and engineers, and helping to ensure adequate training and certification of contractors involved

in school asbestos abatement projects. The technical assistance program, operating principally through EPA's Regional offices, will be maintained and we will continue to work with States in developing State asbestos abatement contractor certification programs. Five information and training centers will be in operation.

#### Prevent Risks From New Chemical Substances

In 1987, our emphasis in the new chemicals program will be on continuing to operate a careful and efficient premanufacture review program that is responsive to the workload demands generated by industry's submission of notices. We expect to receive about 1800 new chemical notices, the same level as 1986. There was a significant increase in notices between 1984 and 1985 from 1200 to over 1700. This increase was accommodated through productivity improvements in logging notices, in the review process, and in the automation of information. We are now beginning to receive test results on new chemicals from past voluntary testing agreements and Section 5(e) orders requiring manufacturers to perform testing. It will be necessary to begin evaluation of this data to determine if additional action is necessary. There will be increased attention to coordinating new chemical reviews and actions with other programs to ensure that decisions are consistent across the Agency and that future environmental problems (e.g., air, water, disposal) are prevented. New chemical actions will also be closely coordinated with the existing chemical program.

#### Ensure Compliance with Toxic Substances Regulations

The major objective of the Toxic Substances enforcement program in 1987 is to maintain an efficient and effective national compliance monitoring program with appropriate coverage of all TSCA regulations. The enforcement program depends heavily upon the assistance of State agencies which conduct compliance monitoring inspections under the terms of cooperative enforcement agreements. The number of participating States will remain at the 1986 level of 17; State programs will continue to emphasize compliance monitoring of the asbestos-in-schools and PCB regulations as well as newer rules such as the PCB transformer fires rule and the asbestos worker protection rule. The Agency will also continue to emphasize laboratory inspections and data audits, which help assure the integrity of scientific testing data submitted to the Agency.

#### Research and Development

The 1987 Toxic Substances Research and Development budget request includes resources to continue the development of information on the health and environmental effects of toxic chemicals, provide information on special human data needs, perform research on structure activity relationship, extrapolation, dosimetry, biological markers and on environmental risk assessment. Exposure monitoring research will also continue. Transport, fate, and field validation efforts will continue to provide information on the changes in and movement of chemicals in the environment. In 1987, the biotechnology research program will be augmented to provide additional information on the effects of genetically engineered organisms. Finally, support services will be continued for quality assurance, reference materials, and risk and exposure assessment.

# TOXIC SUBSTANCES

PROGRAM ACTIVITIES	Actual 1985	Budget Estimate 1986	Current Estimate 1986	Estimate 1987	Increase (+) Decrease (-) 1987 vs. 1986
<u>Incremental Outputs</u>					
Toxics Integration					
Intermedia Priority Pollutant Documents Produced.....	3	3	2	2	-
Existing Chemical Review					
Substantial Risk Notices/FYI's Received.....	439	400	400	400	-
Test Studies Received.....	118	200	170	170	-
Chemical-Specific Evaluations Underway.....	83	85	85	85	-
Category Evaluations Underway..	0	2	2	3	+1
Section 6 Rules: Proposed.....	2	11	4	3	-1
Section 5 SNUR: Proposed.....	2	0	3	3	-
Section 8 Rules: Proposed/Final	25	21	15	15	-
New Chemical Review					
No. of New Chemicals Subject to Proposed SNURs.....	19	10	10	10	-
Toxic Substances Enforcement					
Laboratory Inspections.....	26	25	45	45	-
Test Study Audits.....	122	65	95	95	-
Inspections, Section 5.....	336	320	320	320	-
Inspections, Section 6:					
PCB Inspections *.....	1,616	2,460	2,500	2,500	-
Asbestos Inspections **.....	2,019	3,600	2,505	2,175	-
Inspections, Section 8.....	494	340	340	340	-
Inspections, Section 13.....	586	-	700	700	-
Notices of Violation.....	1,136	2,269	1,430	1,350	-80
Administrative Orders.....	733	611	800	750	-50
Civil Litigation.....	6	20	6	6	-
Criminal Litigation.....	2	9	2	2	-
<u>Cumulative Outputs</u>					
Chemical Testing					
Initial ITC Actions.....	81	92	93	101	+8
Post-Initial ITC Actions.....	41	46	54	58	+4
Promulgated ITC Actions.....	0	0	2	17	+15
Other Testing Actions.....	3	2	6	11	+5
Test Guidelines/GLPs Published.	94	96	98	100	+2
Existing Chemical Review					
Chemical Advisories.....	6	15	8	10	+2
Section 6 Rules: Final.....	13	18	16	19	+3
Section 9 Referrals.....	1	7	4	6	+2
Section 5 SNURs: Final.....	0	0	3	6	+3
PCB Disposal Permits Reviewed.	31	42	41	51	+10

	Actual 1985	Budget Estimate 1986	Current Estimate 1986	Estimate 1987	Increase (+) Decrease (-) 1987 vs. 1986
<u>Cumulative Outputs</u>					
New Chemical Review					
New Notices Received***.....	6,301	6,701	8,101	9,901	+1,800
PMN Control Actions Taken****.	465	555	585	705	+120
No. of New Chemicals Subject to Final SNURs.....	14	32	29	44	+15

\* Includes Federal and anticipated State inspections.

\*\* Includes Federal, contract, and anticipated State inspections.

\*\*\* Includes exemption notices.

\*\*\*\* Includes PMNs withdrawn in light of EPA concerns, voluntary testing and voluntary controls.

# **Research and Development**





ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# TOXIC SUBSTANCES

## Chemical Testing & Assessment

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
Scientific Assessment - Chemical Testing & Assessment - Toxic Substances							
Salaries & Expenses	\$151.2	\$224.6	\$224.6	-\$9.7	\$214.9	\$209.7	-\$5.2
Research & Development	\$41.0	\$522.6	\$481.8	-\$20.6	\$461.2	\$213.0	-\$248.2
TOTAL	\$192.2	\$747.2	\$706.4	-\$30.3	\$676.1	\$422.7	-\$253.4
Monitoring Systems & Quality Assurance - Chemical Testing & Assessment-Toxic Substances							
Salaries & Expenses	\$1,521.7	\$1,504.3	\$1,455.9	-\$62.6	\$1,393.3	\$1,455.9	\$62.6
Research & Development	\$3,384.2	\$4,645.7	\$4,503.4	-\$193.6	\$4,309.8	\$4,381.1	\$71.3
TOTAL	\$4,905.9	\$6,150.0	\$5,959.3	-\$256.2	\$5,703.1	\$5,837.0	\$133.9
Health Effects - Chemical Testing and Assessment-Toxic Substances							
Salaries & Expenses	\$3,398.5	\$3,849.6	\$3,868.0	-\$166.3	\$3,701.7	\$3,402.0	-\$299.7
Research & Development	\$6,772.8	\$10,883.8	\$9,606.7	-\$413.1	\$9,193.6	\$8,680.0	-\$513.6
TOTAL	\$10,171.3	\$14,733.4	\$13,474.7	-\$579.4	\$12,895.3	\$12,082.0	-\$813.3
Environmental Engineering & Technology - Chemical Testing & Assessment- Toxic Substances							
Salaries & Expenses	\$592.9	\$535.6	\$632.8	-\$27.2	\$605.6	\$618.4	\$12.8
Research & Development	\$378.9	\$3,200.0	\$2,872.2	-\$123.4	\$2,748.8	\$2,575.0	-\$173.8
TOTAL	\$971.8	\$3,735.6	\$3,505.0	-\$150.6	\$3,354.4	\$3,193.4	-\$161.0

TOXIC SUBSTANCES

Chemical Testing & Assessment

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
-----							

PROGRAM

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Environmental Processes  
& Effects - Chemical  
Testing and Assessment-  
Toxic Substances

Salaries & Expenses	\$5,830.3	\$5,539.6	\$5,495.6	-\$236.3	\$5,259.3	\$5,288.9	\$29.6
Research & Development	\$2,886.6	\$7,148.2	\$7,344.4	-\$315.7	\$7,028.7	\$5,606.0	-\$1,422.7
TOTAL	\$8,716.9	\$12,687.8	\$12,840.0	-\$552.0	\$12,288.0	\$10,894.9	-\$1,393.1

TOTAL:

Salaries & Expenses	\$11,494.6	\$11,653.7	\$11,676.9	-\$502.1	\$11,174.8	\$10,974.9	-\$199.9
Research & Development	\$13,463.5	\$26,400.3	\$24,808.5	-\$1,066.4	\$23,742.1	\$21,455.1	-\$2,287.0

Chemical Testing & Assessment	TOTAL	\$24,958.1	\$38,054.0	\$36,485.4	-\$1,568.5	\$34,916.9	\$32,430.0	-\$2,486.9
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PERMANENT WORKYEARS

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Scientific Assessment -  
Chemicals Testing &  
Assessment - Toxic  
Substances

2.9	3.0	3.5	3.5	3.5
-----	-----	-----	-----	-----

Monitoring Systems &  
Quality Assurance -  
Chemical Testing &  
Assessment-Toxic  
Substances

23.1	23.7	23.7	23.7	23.7
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Health Effects -  
Chemical Testing and

47.4	60.0	65.1	65.1	54.6	-10.5
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TOXIC SUBSTANCES

Chemical Testing & Assessment

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
Assessment Toxic Substance							
Environmental Engineering & Technology - Chemical Testing & Assessment Toxic Substances	9.1	10.5	10.0		10.0	10.0	
Environmental Processes & Effects - Chemical Testing and Assessment Toxic Substances	91.3	88.2	85.2		85.2	85.7	0.5
TOTAL PERMANENT WORKYEARS	173.8	185.4	187.5		187.5	177.5	-10.0
TOTAL WORKYEARS							
-----							
Scientific Assessment - Chemicals Testing & Assessment - Toxic Substances	3.3	4.0	4.0		4.0	4.0	
Monitoring Systems & Quality Assurance - Chemical Testing & Assessment-Toxic Substances	24.5	26.7	26.7		26.7	26.7	
Health Effects - Chemical Testing and Assessment Toxic Substances	55.4	65.1	65.1		65.1	62.6	-2.5

# TOXIC SUBSTANCES

## Chemical Testing & Assessment

ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
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(DOLLARS IN THOUSANDS)

### TOTAL WORKYEARS

Environmental Engineering & Technology - Chemical Testing & Assessment- Toxic Substances	10.7	10.5	11.3		11.3	11.3
Environmental Processes & Effects - Chemical Testing and Assessment- Toxic Substances	100.2	93.8	93.3		93.3	91.8
TOTAL WORKYEARS	194.1	200.1	200.4		200.4	196.4

-1.5

-4.0

## TOXIC SUBSTANCES

### Chemical Testing and Assessment

#### Principal Outputs by Objective

##### 1987 PLANNED OUTPUTS

=====

##### Objective 1: Develop and Validate Test Methods for TSCA Studies

- o Journal article on avian detection and discrimination of chemicals in feed (Env. Processes)
- o Report on application of analytical methods for detecting organic compounds in biological tissues (Monitoring)
- o Journal article on analyses of azo dyes (Monitoring)

##### Objective 2: Perform Health Research on Biological Markers, Dosimetry and Extrapolation

- o Journal article on germ cell cytogenetic test systems (Health)

##### Objective 5: Perform Engineering Research in Support of TSCA

- o Interim program report for estimation of the potential for accidental and deliberate release and worker exposure of RDNA from fermentation process (Engineering)
- o Evaluation of plastic barrier effectiveness, glove bag removal, and localized vacuum removal of asbestos (Engineering)

##### Objective 6: Perform Exposure Monitoring Research

- o Interim report on pollutant sources and human exposure to toxic pollutants using Total Exposure Assessment Methodology (TEAM) data (Monitoring)

##### Objective 7: Develop Structure Activity Relationships Data

- o Journal article on the genotoxicity of acrylates in cultured mammalian cells (Health)

##### Objective 8: Perform Research on Biotechnology and Microbial and Biochemical Pest Control Agents

- o Journal article on recombination of DNA in plasmids and genomes of Bacilli (Health)

##### Objective 9: Perform Studies on Ecotoxicity and Develop Environmental Risk Assessment Protocols

- o Environmental risk assessment protocols and guidelines (Sci. Assessment)

##### Objective 10: Provide Support Services for TSCA Studies

- o Annual report on asbestos audit program (Monitoring)

## 1986 PLANNED OUTPUTS

=====

### Objective 1: Develop and Validate Test Methods for TSCA Studies

- o Report on application of analytical methods for detecting organic compounds in biological tissues (Monitoring)
- o Report on techniques for effects and uptake of sediment-associated toxic chemicals by benthic marine species (Env. Processes)
- o Methods for extrapolating male rodent reproductive toxicity data to humans (Sci. Assessment)
- o Two immunotoxicity assays in animal models as part of a Tier Testing Procedures for immune effects (Health)

### Objective 2: Perform Research on Biological Markers, Dosimetry and Extrapolation

- o Report on how to use newly developed predictive models for risk from asbestoform minerals (Health)
- o Review and analyze the literature for 506 selected chemicals and establish a data base to support assessment of genotoxicology (Health)

### Objective 4: Perform Ecological Research Including Transport, Fate and Field Validation

- o Project report on screening model to predict body burdens to calculate risk from toxicant loads (Env. Processes)

### Objective 5: Perform Engineering Research in Support of TSCA

- o Report describing technology and engineering assessments of genetically engineered organisms (Engineering)
- o Evaluations of procedures and methodology of asbestos abatement (Engineering)

### Objective 6: Perform Exposure Monitoring Research

- o Evaluation and standardization of dietary exposure as part of human exposure program (Monitoring)
- o Report on development and validation procedures for total exposure multimedia models (Monitoring)

### Objective 7: Develop Structure Activity Relationships Data

- o Report on how to use molecular electrostatic potential for risk assessment on chemically induced toxicity for one class of chemicals (Health)
- o Report on SAR methods to predict major metabolites of industrial chemicals (Env. Processes)

### Objective 9: Perform Studies on Ecotoxicity and Develop Environmental Risk Assessment Protocols

- o Work group project reports on environmental risk assessment (Sci. Assessment)

### Objective 10: Provide Support Services for TSCA Studies

- o Annual report on asbestos audit program (Monitoring)

## 1985 ACTUAL OUTPUTS

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### Objective 1: Develop and Validate Test Methods for TSCA Studies

- o Journal article on cancer of the respiratory tract: Predisposing Factors (Health)

- o Report on evaluating the effects of feeding chemicals to live prey in carnivore feeding tests (Env. Processes)

Objective 2: Perform Health Research on Biological Markers, Dosimetry and Extrapolation

- o Journal article on the use of hepatocytes as an activating system of rodent whole embryo culture (Health)

Objective 4: Perform Research on Biological Markers, Dosimetry and Extrapolation

- o Ground and surface water modeling users guide (Env. Processes)
- o Final report on the comparison of biodegradation from microcosms to field systems (Env. Processes)

Objective 5: Perform Engineering Research in Support of TSCA

- o Report on industrial process profile for environmental use for polymer processing (Engineering)
- o Report on industrial process profile for environmental use for plastics and resin processing industry (Engineering)

Objective 6: Perform Exposure Monitoring Research

- o Annual report of research activities and methods development at the Exposure Monitoring Test Site (EMTS) (Monitoring)
- o Field report on TEAM Study Phase II (Monitoring)

Objective 7: Develop Structure Activity Relationships Data

- o Report on azoreductase studies (Health)

Objective 10: Provide Support Services for TSCA Studies

- o Annual report quality control sample program EPA repository for Toxic and Hazardous Materials (Monitoring)
- o Annual report on asbestos audit program (Monitoring)



## TOXIC SUBSTANCES

### Chemical Testing and Assessment

#### Budget Request

The Agency requests a total of \$32,430,000 supported by 196.4 total workyears for 1987, a decrease of \$2,486,900 and a decrease of 4.0 total workyears from 1986. Of the request, \$10,974,900 will be for the Salaries and Expenses appropriation and \$21,455,100 will be for the Research and Development appropriation, decreases of \$199,900 and \$2,287,000, respectively.

#### Program Description

The Chemical Testing and Assessment research program supports the Office of Toxic Substances (OTS) by providing the scientific tools to implement the Toxic Substances Control Act (TSCA).

Objective 1: Develop and Validate Test Methods for TSCA Studies. This research develops and validates health and environmental testing protocols to be incorporated into TSCA Section 4 guidelines, risk assessment methods, and analytical methods for identifying and quantifying environmental pollutants.

Objective 2: Perform Health Research on Biological Markers, Dosimetry and Extrapolation. This effort develops methods for extrapolating from high to low doses between mammalian species to enhance risk assessment predictability and capability. Research also focuses on defining the relationships between biochemical indicators of exposure to neurotoxins and behavioral dysfunctions.

Objective 3: Provide Information on Special Human Data Needs. This activity focuses on investigations of human populations exposed to environmental pollutants.

Objective 4: Perform Ecological Research Including Transport, Fate, and Field Validation. This research focuses on developing and conducting exposure and hazard assessments of chemicals in water, air, and multimedia environments. Work focuses on inclusion of identified transport and transformation processes, pathways of exposure, population characteristics, environmental features and hazard assessment techniques. Emphasis is being placed on improving methods and data, and on defining limits of applicability of models.

Objective 5: Perform Engineering Research in Support of TSCA. Research in this area focuses on the development of models to predict the release of and exposure to new and existing chemicals. This research addresses those classes of chemicals for which the Agency does not have adequate information on the degree to which existing control systems limit their release, resulting in more effective Pre-Manufacture Notification (PMN) decisions.

Objective 6: Perform Exposure Monitoring Research. This research establishes the environmental methods data bases and statistical tools to improve exposure monitoring for OTS. Multimedia monitoring methods, sample designs and data analysis techniques are also designed and tested to support human exposure monitoring programs for regulatory concerns about chemical mixtures.

Objective 7: Develop Structure Activity Relationships Data. These efforts develop predictive methods (structure activity relationships) to provide a tool for determining whether new chemicals pose unreasonable risk or require further testing.

Objective 8: Perform Research on Biotechnology and Microbial and Biochemical Pest Control Agents. Research in this area is developing methods to assess the potential health and environmental hazards of biotechnology products. Additionally, methods are being developed to contain and destroy genetically engineered organisms from manufacturing processes.

Objective 9: Perform Studies on Ecotoxicity and Develop Environmental Risk Assessment Protocols. This effort focuses on development of methodologies and models to determine risks posed to ecosystems by exposure to environmental pollutants. The program is currently developing environmental risk assessment protocols for both aquatic and terrestrial systems and will be used in evaluating risks from both new and existing chemicals.

Objective 10: Provide Support Services for TSCA Studies. This research provides support for risk and exposure assessment, quality assurance, dissemination of reference standards and quality assurance reagents as well as expert consultation on problems associated with the evaluation of PMN chemicals.

## SCIENTIFIC ASSESSMENT

### 1987 Program Request

The Agency requests a total of \$422,700 supported by 4.0 total workyears for this program, of which \$209,700 will be for the Salaries and Expenses appropriation and \$213,000 will be for the Research and Development appropriation. This represents decreases of \$5,200 and \$248,200, respectively, and no change in total workyears. These decreases reflect the completion of a number of assessment methods for toxics as well as the initial phase of environmental risk assessment protocols.

Develop and Validate Test Methods for TSCA Studies. The 1987 Scientific Assessment program will continue to develop assessment methods for reproductive dysfunction in humans caused by exposure to environmental chemicals.

Perform Studies on Ecotoxicity and Develop Environmental Risk Assessment Protocols. Scientific assessment support will continue for the development of environmental risk assessment protocols for both aquatic and terrestrial ecosystems. Draft protocols developed in 1986 will be completed.

Provide Support Services for TSCA Studies. Scientific assessment support will continue for preparation, consultation and review of OTS-generated assessments of cancer, mutagenicity, adverse reproductive/developmental effects, and exposure. These activities will support decision making under TSCA (existing chemicals program, PMN review, and test guidelines development).

### 1986 Program

In 1986, the Agency is allocating a total of \$676,100 supported by 4.0 total workyears for this program, of which \$214,900 is from the Salaries and Expenses appropriation and \$461,200 is from the Research and Development appropriation. The 1986 program is continuing to provide support for preparation and review of risk and exposure assessments, development of assessment methods as well as new efforts to develop protocols for environmental risk assessments. Particular emphasis is being given to the development of risk assessment procedures for low-dose exposures and metabolic pathways.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$192,200 supported by 3.3 total workyears for this program, of which \$151,200 was from the Salaries and Expenses appropriation and \$41,000 was from the Research and Development appropriation. In 1985, assessment support was provided for methylene chloride, formaldehyde and dioxins. A conference was held on genetically altered viruses in the environment.

## MONITORING SYSTEMS AND QUALITY ASSURANCE

### 1987 Program Request

The Agency requests a total of \$5,837,000 supported by 26.7 total workyears for this program, of which \$1,455,900 will be for the Salaries and Expenses appropriation and \$4,381,100 will be for the Research and Development appropriation. This represents increases of \$62,600, and \$71,300, respectively, and no change in total workyears. The increases reflect adjustments to the 1986 base as part of government-wide deficit reductions.

Develop and Validate Test Methods for TSCA Studies. Efforts will also continue to develop and evaluate biological and chemical techniques to identify and quantify pollutants in both humans and the environment. Pattern recognition procedures will be developed to identify pollutants from analytical spectra. Analytical techniques will be developed to detect pollutants in foods, and immunochemical procedures will be evaluated. This research will provide techniques for accurate monitoring of exposures to toxic chemicals. Enzyme induction bioassays will also be evaluated as indicators of human exposures to complex organic compounds. Efforts will also develop and validate effective and economical analytical methodologies for asbestos and other fibers.

Perform Exposure Monitoring Research. Research in this area will develop monitoring systems to estimate human exposure to pollutants via multiple pathways using the TEAM approach. Statistical tools and data analysis techniques will be developed to conduct surveillance and total exposure monitoring and model pollutant exposure and to produce predictive techniques in the Human Exposure Assessment Location (HEAL) project. This research will improve exposure assessment capabilities for regulatory efforts.

Provide Support Services for TSCA Studies. Monitoring and quality assurance support will continue for the production of reference standards and quality assurance reagents in environmental and biological matrices for routine monitoring systems. Quality assurance guidelines will be produced for survey design, sample collection and sample analysis and dietary exposures. Laboratory audits will be conducted and guidelines will be developed to evaluate total exposure models.

### 1986 Program

In 1986, the Agency is allocating a total of \$5,703,100 supported by 26.7 total workyears for this program, of which \$1,393,300 is from the Salaries and Expenses appropriation and \$4,309,800 is from the Research and Development appropriation. The 1986 program is continuing support for exposure monitoring, developing analytical methods and providing quality assurance support and standard reference materials. Particular emphasis is being given to conducting field investigations under the HEAL project.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$4,905,900 supported by 24.5 total workyears for this program, of which \$1,521,700 was from the Salaries and Expenses appropriation and \$3,384,200 was from the Research and Development appropriation. In 1985, reports were prepared on interlaboratory evaluation of the toxicity assay, the asbestos audit program, and Phase II of the TEAM study.

## HEALTH EFFECTS

### 1987 Program Request

The Agency requests a total of \$12,082,000 supported by 62.6 total workyears for this program, of which \$3,402,000 will be for the Salaries and Expenses appropriation and \$8,680,000 will be for the Research and Development appropriation. This represents decreases of \$299,700 and \$513,600, respectively, and a decrease of 2.5 total workyears. The decreases reflect the completion of a number of test methods in support of TSCA Section 4 guidelines.

Develop and Validate Test Methods for TSCA Studies. Health research will continue to develop methodologies and bioassays to detect and characterize neurotoxicity and reproductive toxicity associated with chemical exposures. Sensitive methods will be developed to rapidly detect pulmonary carcinogens and promoters. New methods will be developed to improve the sensitivity and broad spectrum response of oncogenic cell transformation bioassays. Finally, biochemical and physiological test methods for animal and in-vitro studies and biochemical indicators of nervous system damage will be developed.

Perform Health Research on Biological Markers, Dosimetry and Extrapolation. Health research will provide improved methods for extrapolation from animal data to human likelihood of mutagenesis and carcinogenesis along with other potential adverse health effects such as neurobehavioral, pulmonary, hepatic and reproductive activities. Efforts will also provide predictive models for dose effects of asbestiform minerals to determine dose effect response for mineral fibers such as asbestos and proposed substitutes.

Provide Information on Special Human Data Needs. This research will investigate population groups exposed to environmental contaminants which are suspect toxicants for particular organ systems to determine if biological indicators of dose and/or effects are related to environmental levels of exposure and if they are correlated to adverse effects measured by traditional methods.

Develop Structure Activity Relationships Data. Structure Activity Relationships (SAR) methods and scientific data bases will be developed which allow an accurate prediction of carcinogenic and mutagenic effects of chemicals based on structural, physiochemical, topographical, mechanistic and electronic parameters. A report on SAR pattern recognition techniques for genotoxic effects as well as a combined data base management system for predicting genotoxic effects of chemicals will be provided.

Perform Research on Biotechnology and Microbial and Biochemical Pest Control Agents. Health research studies will be conducted to determine the genetic stability and function of a baculovirus expression vector in vertebrate cells. A computerized data base will be developed which compiles the known characteristics of genetically engineered biological material, and a study will be initiated on the mechanism and frequency of genetic exchange of plasmids between related Bacillus species.

### 1986 Program

In 1986, the Agency is allocating a total of \$12,895,300 supported by 65.1 total workyears for this program, of which \$3,701,700 is from the Salaries and Expenses appropriation and \$9,193,600 is from the Research and Development appropriation. The 1986 program is continuing to provide support for the development of test methods in support of TSCA Section 4 test guidelines, and to perform research on extrapolation and biological markers. Major new initiatives are being undertaken on human exposure, reproductive toxicity, biotechnology and extrapolation research.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$10,171,300 supported by 55.4 total workyears for this program, of which \$3,398,500 was from the Salaries and Expenses appropriation and \$6,772,800 was from the Research and Development appropriation. In 1985, journal articles were produced on an electrophysiological test battery for assessing the effects of exposure to toxic chemicals as well as on the use of hepatocytes as an activating system of rodent whole embryo culture.

### ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

#### 1987 Program Request

The Agency requests a total of \$3,193,400 supported by 11.3 total workyears for this program, of which \$618,400 will be for the Salaries and Expenses appropriation and \$2,575,000 will be for the Research and Development appropriation. This represents an increase of \$12,800 and a decrease of \$173,800, respectively, and no change in total workyears. The increase in Salaries and Expenses reflects adjustments to the 1986 base as part of government-wide deficit reductions. The decrease in Research and Development reflects the completion of studies on release and controls of several chemicals such as azo dyes.

Perform Engineering Research in Support of TSCA. Engineering efforts will continue to develop techniques to assess the potential for toxic releases and exposures from processing and manufacturing of new chemicals, as well as assess production unit operations. Research will also provide mathematical models for predicting permeation of liquid chemicals through common polymer gloves and evaluate the degree of protection from chemicals given by various respirators. Research will be performed on the treatability of new chemicals, and alternatives will be identified and evaluated to mitigate release and exposure of specific existing chemicals. Additional research will provide necessary information on chemical releases and exposure in support of TSCA new and existing chemical control efforts.

Perform Research on Biotechnology and Microbial and Biochemical Pest Control Agents. Feasibility studies will be conducted on fault tree analysis techniques for assessing the potential for release of process materials from conventional fermentation process equipment. This information will contribute to the data base on the release of genetically engineered organisms in support of the TSCA PMN review process.

#### 1986 Program

In 1986, the Agency is allocating a total of \$3,354,400 supported by 11.3 total workyears for this program, of which \$605,600 is from the Salaries and Expenses appropriation and \$2,748,800 is from the Research and Development appropriation. The 1986 program is continuing to develop information on release and control measures for new and existing chemicals, as well as expanding its work on the containment and destruction of genetically engineered organisms.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$971,800 supported by 10.7 total workyears for this program, of which \$592,900 was from the Salaries and Expenses appropriation and \$378,900 was from the Research and Development appropriation. In 1985, a report was prepared on industrial process profiles for environmental use for polymer processing as well as on fault tree analysis techniques for assessing the potential for releases of process materials from fermentation processes.

## ENVIRONMENTAL PROCESSES AND EFFECTS

### 1987 Program Request

The Agency requests a total of \$10,894,900 supported by 91.8 total workyears for this program, of which \$5,288,900 will be for the Salaries and Expenses appropriation and \$5,606,000 will be for the Research and Development appropriation. This represents an increase of \$29,600 and a decrease of \$1,422,700, respectively, and a decrease of 1.5 total workyears. The increase in Salaries and Expenses reflects adjustments to the 1986 base as part of government-wide deficit reductions. The decrease in Research and Development reflects the completion of a number of test methods in support of TSCA Section 4 guidelines.

Develop and Validate Test Methods for TSCA Studies. Environmental research will continue to develop and evaluate test methods for defining toxicity of chemicals to aquatic (freshwater and marine) and terrestrial species. Bioavailability tests for sediment bound toxics in freshwater and estuarine species will be developed. Methods to use fish as carcinogen and teratogen species will be validated. Finally, methods to evaluate chemical effects on egg viability in avian species will be developed and validated. Such information supports TSCA Section 4 guidelines for testing of chemicals.

Perform Ecological Research Including Transport, Fate and Field Validation. Environmental processes research will continue to provide support for TSCA activities through studies of toxicity, and fate and transport of chemicals in aquatic, terrestrial and air environments. Additional research will be designed to evaluate exposure models in laboratory model ecosystems and field situations.

Develop Structure Activity Relationships Data. Environmental processes research will include the generation of environmental fate and effects data on typical PMN chemical types, documentation of test results of PMN analogs, and development of structure activity methodologies and other estimation techniques for predicting fate and effects of chemicals.

Perform Research on Biotechnology and Microbial and Biochemical Pest Control Agents. Environmental processes research will develop methods, analytical techniques and testing protocols for estimating survival, fate and effects of genetically altered microbes and the stability within their genetic pool. Research will also determine the probable hazards associated with modified microbes used in testing or proposed for industrial application. This information will aid OTS in reviewing PMN applications for products of biotechnology. Adequate methodologies for evaluating such organisms do not currently exist.

Perform Studies on Ecotoxicity and Develop Environmental Risk Assessment Protocols. Environmental processes research will focus on the development of environmental risk assessment methodology for toxics by integrating exposure and hazardous assessment data to determine the probability of risk to important populations. Aquatic and terrestrial exposure assessment data for risk models and hazard assessment models (relating single species tests to natural population) will also be developed. Availability of environmental risk methods will substantially improve the Agency's ability to regulate chemicals under Sections 4 and 5 of TSCA.

Provide Support Services for TSCA Activities. Environmental processes efforts will continue to support OTS on complex problems associated with the evaluations of PMN chemicals, including products of biotechnology. Support for development of TSCA test rules will also continuing.

#### 1986 Program

In 1986, the Agency is allocating a total of \$12,288,000 supported by 93.3 total workyears for this program, of which \$5,259,300 is from the Salaries and Expenses appropriation and \$7,028,700 is from the Research and Development appropriation. The 1986 program is continuing the development of test methods in support of TSCA Section 4 guidelines, research on transport, fate and field validation, and development of structure-activity relationships data. New work is being performed on the development of environmental risk assessment methods, as well as research to determine the environmental effects of genetically engineered organisms.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$8,716,900 supported by 100.2 total workyears for this program, of which \$5,830,300 was from the Salaries and Expenses appropriation and \$2,886,600 was from the Research and Development appropriation. In 1985, reports were prepared on the comparison of biodegradation from microcosms to field systems.





# **Abatement and Control**



ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# TOXIC SUBSTANCES

## Toxic Substances Financial Assistance

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
Asbestos-In-Schools- Loans And Grants							
Abatement Control and Compliance	\$41,310.8		\$46,000.0	-\$1,978.0	\$44,022.0		-\$44,022.0
TOTAL	\$41,310.8		\$46,000.0	-\$1,978.0	\$44,022.0		-\$44,022.0
Asbestos-In-Schools- Program Administration							
Salaries & Expenses						\$537.4	\$537.4
Abatement Control and Compliance	\$4,429.3		\$4,000.0	-\$172.1	\$3,827.9	\$3,500.0	-\$327.9
TOTAL	\$4,429.3		\$4,000.0	-\$172.1	\$3,827.9	\$4,037.4	\$209.5
TOTAL:							
Salaries & Expenses						\$537.4	\$537.4
Abatement Control and Compliance	\$45,740.1		\$50,000.0	-\$2,150.1	\$47,849.9	\$3,500.0	-\$44,349.9
Toxic Substances - Financial Assistance	TOTAL	\$45,740.1	\$50,000.0	-\$2,150.1	\$47,849.9	\$4,037.4	-\$43,812.5
PERMANENT WORKYEARS							
-----							
Asbestos-In-Schools- Program Administration						11.2	11.2
TOTAL PERMANENT WORKYEARS						11.2	11.2

# TOXIC SUBSTANCES

## Toxic Substances Financial Assistance

ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
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(DOLLARS IN THOUSANDS)

TOTAL WORKYEARS

-----  
Asbestos-In-Schools-  
Program Administration

12.0 12.0

TOTAL WORKYEARS

12.0 12.0

## TOXIC SUBSTANCES

### Toxic Substances Financial Assistance

#### Budget Request

The Agency requests a total of \$4,037,400 supported by 12.0 total workyears for 1987, a decrease of \$43,812,500 and an increase of 12.0 total workyears from 1986. Of the request, \$537,400 will be for the Salaries and Expenses appropriation and \$3,500,000 will be for the Abatement, Control and Compliance appropriation, an increase of \$537,400 and a decrease of \$44,349,900 respectively.

#### Program Description

The major programs under this subactivity include:

Asbestos-in-Schools Loans and Grants -- This program provides financial assistance to public and private schools, with demonstrated financial need and asbestos hazards, for purposes of undertaking asbestos abatement projects. Funding for this program is authorized under the Asbestos School Hazard Abatement Act (ASHAA) of 1984.

Asbestos-in-Schools Program Administration -- The objective of this program is to administer a process for assessing the eligibility of applicants for financial assistance and making grants or loan awards as authorized under ASHAA. In addition to administering a loan and grant process, this program also supports programs that provide technical assistance to individuals and organizations interested in addressing asbestos hazards. Activities include providing technical advice, primarily through EPA Regional offices, working with States to develop State certification programs for asbestos abatement contractors, and establishing regional asbestos information and training centers.

#### ASBESTOS-IN-SCHOOLS LOANS AND GRANTS

##### 1987 Program Request

The Agency is not requesting additional funding to provide asbestos abatement financial assistance to schools since funding for abatement projects does not represent the most effective use of Federal resources. These activities should be the primary responsibility of State and local governments.

##### 1986 Program

In 1986, the Agency is allocating a total of \$44,022,000 for this program all of which is in the Abatement, Control and Compliance appropriation.

In 1986, loans and grants will be provided to eligible schools and school districts based on evaluations of candidate projects. EPA will use information made available from applicants and States, in addition to information collected by EPA from on-site inspections, to evaluate and select projects for funding.

##### 1985 Accomplishments

In 1985, the Agency obligated a total of \$41,310,800 all in the Abatement, Control and Compliance appropriation.

On June 6, 1985, EPA offered \$45,000,000 in financial assistance under the Asbestos School Hazard Abatement Act (ASHAA) to needy schools for the purpose of undertaking asbestos abatement projects. Awards were distributed for 417 abatement projects in 340 individual schools in 198 local education agencies. These funds were appropriated in 1984 and within nine months, EPA had met the statutory deadline for issuing loan and grant offers.

Implementation of ASHAA required close coordination between Headquarters, State officials, and Regional staff. In early 1985, State officials collected, sorted, and submitted applications to EPA, providing a preliminary ranking of projects. Applications were carefully reviewed by the Agency using both hazard inspectors, who visited all selected projects before funds were released, and Headquarters staff, who evaluated these applications individually. Follow-up on funded projects will continue into 1986.

#### ASBESTOS-IN-SCHOOLS PROGRAM ADMINISTRATION

##### 1987 Program Request

The Agency requests a total of \$4,037,400 supported by 12.0 total workyears for this program, of which \$537,400 will be for the Salaries and Expenses appropriation and \$3,500,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$537,400 and a decrease of \$327,900 respectively and an increase of 12.0 total workyears. The increases result from a transfer of resources from other programs. The decrease results from a lower requirement to start new State contractor certification programs.

In 1987, EPA will focus on the technical assistance program originally set up in 1979. We will continue to provide abatement advice, principally through the Regional offices, to school officials, abatement contractors, architects, and engineers, as well as building owners and managers. We will continue to work with State governments to expand the number of contractor certification programs to ensure adequate training and certification of contractors involved in asbestos abatement activities. Five regional information and training centers will be in operation in 1987 at the University of Kansas, Tufts University, Georgia Institute of Technology, the University of Illinois, and the University of California. We will continue to refine guidelines to assist the public in identifying situations in which asbestos-containing materials present a serious risk and which should be corrected.

##### 1986 Program

In 1986, the Agency is allocating a total of \$3,827,900 for this program all of which is from the Abatement, Control and Compliance appropriation. Salaries and Expenses and total workyears are budgeted in the Existing Chemical Review program.

The funds allocated to this program are being made available through the administrative set-aside provisions of the Asbestos School Hazard Abatement Act.

Fifteen additional State abatement contractor certification programs are being supported. Two additional information and training centers will begin operation, to make a total of five. Other training programs for asbestos abatement contractors and workers are being supported by grants to trade associations, such as the National Asbestos Council, and by training private vendors (whose courses will then be subject to EPA audit). The asbestos technical assistance program will continue to collect state-of-the-art information for dissemination through updated guidance materials. In addition, we plan to issue rules to restrict commercial uses of asbestos fibers, and to promulgate a rule to protect public employees from exposure during asbestos abatement. An efficacy study will be completed which will evaluate

airborne levels of asbestos fibers before, during, and after an abatement project, both within and outside of the building structure.

#### 1985 Accomplishments

In 1985, the Agency obligated a total \$4,429,300, all of which was from the Abatement, Control and Compliance appropriation. These funds were made available through the administrative set-aside provision of the Asbestos School Hazard Abatement Act. Salaries and Expenses and total workyears were budgeted under the Existing Chemical Review program.

During 1985, EPA made substantial progress in improving its asbestos technical assistance program. Three information and training centers were opened in Atlanta, Boston, and Kansas City. A model asbestos abatement training course was developed and distributed to every state. Grants to 12 States were awarded to support establishment of contractor certification programs. Several new guidance documents were issued including EPA's major document on the identification and control of asbestos in buildings; a document for maintenance and custodial employees; and guidance for the collection of bulk samples in buildings. Finally, EPA began work on identifying and supporting good sources of training for abatement contractors, architects, engineers, and others who are concerned with proper identification and control of asbestos in buildings.



# TOXIC SUBSTANCES

## Toxic Substances Strategies

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
-----								
(DOLLARS IN THOUSANDS)								
-----								
PROGRAM								
-----								
Toxics Integration								
Salaries & Expenses	\$681.2	\$624.0	\$624.0	-\$26.9	\$597.1		-\$597.1	
Abatement Control and Compliance	\$1,064.4	\$731.1	\$731.1	-\$31.4	\$699.7		-\$699.7	
TOTAL	\$1,745.6	\$1,355.1	\$1,355.1	-\$58.3	\$1,296.8		-\$1,296.8	
Chemical Testing								
Salaries & Expenses	\$5,095.0	\$3,891.9	\$3,891.9	-\$167.4	\$3,724.5	\$3,912.5	\$188.0	
Abatement Control and Compliance	\$7,677.9	\$4,908.3	\$4,908.3	-\$211.1	\$4,697.2	\$4,008.3	-\$688.9	
TOTAL	\$12,772.9	\$8,800.2	\$8,800.2	-\$378.5	\$8,421.7	\$7,920.8	-\$500.9	
Existing Chemical Review								
Salaries & Expenses	\$7,116.5	\$7,885.7	\$7,964.7	-\$342.5	\$7,622.2	\$7,856.4	\$234.2	
Abatement Control and Compliance	\$9,599.8	\$10,760.3	\$10,760.3	-\$462.7	\$10,297.6	\$10,104.8	-\$192.8	
TOTAL	\$16,716.3	\$18,646.0	\$18,725.0	-\$805.2	\$17,919.8	\$17,961.2	\$41.4	
New Chemical Review								
Salaries & Expenses	\$8,634.7	\$9,126.0	\$9,051.0	-\$389.3	\$8,661.7	\$9,043.3	\$381.6	
Abatement Control and Compliance	\$5,534.7	\$7,637.7	\$7,637.7	-\$328.4	\$7,309.3	\$7,237.1	-\$72.2	
TOTAL	\$14,169.4	\$16,763.7	\$16,688.7	-\$717.7	\$15,971.0	\$16,280.4	\$309.4	
TOTAL:								
Salaries & Expenses	\$21,527.4	\$21,527.6	\$21,531.6	-\$926.1	\$20,605.5	\$20,812.2	\$206.7	
Abatement Control and Compliance	\$23,876.8	\$24,037.4	\$24,037.4	-\$1,033.6	\$23,003.8	\$21,350.2	-\$1,653.6	
Toxic Substances Strategies	TOTAL	\$45,404.2	\$45,565.0	\$45,569.0	-\$1,959.7	\$43,609.3	\$42,162.4	-\$1,446.9

# TOXIC SUBSTANCES

## Toxic Substances Strategies

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
PERMANENT WORKYEARS							
Toxics Integration	9.7	8.0	8.0		8.0		-8.0
Chemical Testing	103.0	81.0	81.0		81.0	80.0	-1.0
Existing Chemical Review	149.8	168.6	170.1		170.1	166.6	-3.5
New Chemical Review	188.2	195.6	195.6		195.6	194.6	-1.0
TOTAL PERMANENT WORKYEARS	450.7	453.2	454.7		454.7	441.2	-13.5
TOTAL WORKYEARS							
Toxics Integration	12.1	12.8	12.8		12.8		-12.8
Chemical Testing	109.0	86.0	86.0		86.0	86.0	
Existing Chemical Review	171.6	179.1	180.6		180.6	178.6	-2.0
New Chemical Review	207.0	209.6	209.6		209.6	209.6	
TOTAL WORKYEARS	499.7	487.5	489.0		489.0	474.2	-14.8

## TOXIC SUBSTANCES

### Toxic Substances Strategies

#### Budget Request

The Agency requests a total of \$42,162,400 supported by 474.2 total workyears for 1987, a decrease of \$1,446,900 and 14.8 total workyears from 1986. Of the request, \$20,812,200 will be for the Salaries and Expenses appropriation and \$21,350,200 will be for the Abatement, Control and Compliance appropriation, an increase of \$206,700 and decrease of \$1,653,600 respectively.

#### Program Description

The program areas under this subactivity include:

Toxics Integration -- The major objective of the Toxics Integration program was to aid the Agency in formulating policy and making decisions concerning toxic chemicals in a technically sound and consistent manner. This function was performed by a small staff which provided overview of activities conducted in the Office of Toxic Substances (OTS) and coordinated information exchange within the Agency on these activities. As a result of a 1985 reorganization in the Office of Toxic Substances, these responsibilities, resources, and functions were dispersed throughout the three major TSCA programs. This will allow necessary integration activities to be directly linked with the specific programs they support. The Toxics Integration program element is eliminated in 1987; however, the activities are integrated as appropriate into the three major TSCA program elements.

Chemical Testing -- The Chemical Testing program is the focal point for developing and accumulating data on existing chemicals. Section 4 of TSCA allows EPA to require testing of specific chemicals or mixtures when insufficient data is available to determine health and environmental effects. This testing decision is based on a determination that a chemical may pose an unreasonable risk or that it is produced in substantial quantities which may result in significant human exposure or environmental release.

EPA must respond within one year to the Interagency Testing Committee's (ITC) lists of chemicals designated for priority testing consideration. Those lists are published twice yearly. While ITC testing designations are given priority consideration, EPA can require testing on other chemicals of concern. The testing program emphasizes the importance of obtaining test data as quickly as possible and ensuring that data is of high quality and defensible for regulatory purposes. This requires the publication of acceptable test methodologies and good laboratory practices as well as conducting a comprehensive laboratory/data audit program.

Existing Chemical Review -- The Existing Chemical Review program encompasses the more than 60,000 chemicals in commerce when TSCA was passed and all new chemicals manufactured since then. There are some 63,000 chemicals now listed on the TSCA Inventory of Chemical Substances. The goal of the program is to reduce significant risks to society from these chemicals. To accomplish this EPA (1) looks at known information on existing chemicals, (2) determines whether there might be a problem associated with the chemical, (3) assesses the magnitude of the problem, (4) decides what to do about it, and (5) translates the solution into action. This process of evaluating a chemical's risks as it moves through the review cycle is referred to as the existing chemical program.

TSCA authority over existing chemicals is broad. It includes Section 4, which allows EPA to order testing; Section 8, which permits us to gather information which is already available to manufacturers and processors; Section 6, which allows us to control a chemical at any stage in its life cycle or ban it completely; and Section 9, which requires us to refer a chemical to another regulatory Agency if we

determine that the agency has adequate authority. The significant new use provisions of Section 5, as well as non-regulatory chemical advisories are also used to address certain existing chemical problems.

New Chemical Review -- The New Chemical Review program reflects the preventive philosophy of TSCA by reviewing the potential effects of all new chemicals before they are manufactured or imported. Manufacturers and importers are required to submit to the Agency a 90-day advance notification of their intent to manufacture or import a new chemical substance. The objective of the program is to conduct meaningful reviews on all new chemical notices and take prompt action on those that require additional data or pose concerns potentially warranting control. The Section 5(h)(4) exemption provision allows EPA to exclude low risk chemicals from full review requirements. The authorities of Section 5(a)(2) enable the Agency to extend Section 5 coverage to protect against risks as new chemicals develop.

EPA imposes a variety of control actions on new chemicals of concern. These actions include voluntary actions on the part of the submitter, withdrawal of the notice, and issuance of Section 5(e) and 5(f) orders. Section 5(e) orders are issued when inadequate data are available to evaluate the health and environmental risks posed by a new chemical and when the chemical "may present" an unreasonable risk or will be produced in substantial quantity and will have substantial human exposure or environmental release. The majority of these orders are made with the "consent" of the PMN submitter and result in limited manufacture of the substance, albeit with restrictions, until more definitive information is obtained. The authority of Section 5(f) is invoked when a chemical is found to present an unreasonable risk. This may result in the promulgation of an immediately effective Section 6(a) rule which bans production of the chemical.

## TOXICS INTEGRATION

### 1987 Program Request

The Agency is not requesting any dollars or total workyears for this program element in 1987. This represents decreases of \$597,100 in the Salaries and Expenses appropriation and \$699,700 in the Abatement, Control and Compliance appropriation and a decrease of 12.8 total workyears. Toxics Integration program activities and functions will be transferred to the Existing Chemical Review, Chemical Testing and New Chemical Review programs in 1987.

### 1986 Program

In 1986, the Agency is allocating a total of \$1,296,800 supported by 12.8 total workyears for this program, of which \$597,100 is from the Salaries and Expenses appropriation and \$699,700 is from the Abatement, Control and Compliance appropriation.

The program continues to emphasize identification and coordination of cross-media chemical issues and efforts to increase the utility of TSCA-generated data, risk and exposure assessment tools, and TSCA authorities both within EPA and with other Federal agencies. TSCA information exchange with other EPA offices, States, Regions, other Federal agencies and international organizations will continue.

State activities are coordinated through the National Governor's Association and other organizations, while Federal agency activities are being coordinated through a variety of mechanisms. International information exchange occurs through participation in the International Program on Chemical Safety, the International Register of Potentially Toxic Chemicals and the Organization for Economic Cooperation and Development Switchboard program. Shared information includes data collected under Section 4 testing and Section 8 information gathering as well as other technical and scientific expertise gained through implementation of TSCA.

## 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,745,600 supported by 12.1 total workyears of which \$681,200 was from the Salaries and Expenses appropriation and \$1,064,400 was from the Abatement, Control and Compliance appropriation.

In 1985, Toxics Integration activities focused on cross-media toxic pollution problems and on providing mechanisms to promote inter-media coordination. Cross-media chemical strategies were initiated or continued on polychlorinated biphenyls disposal issues, hexachlorobenzene and methylene chloride. New areas of potential cross-media support using TSCA authorities were identified for various EPA offices, including the use of Section 8(d) by the Office of Solid Waste and Section 4 by the Office of Air and Radiation.

Updates to the Intermedia Priority Pollutant documents were published. The EPA Chemical Activity Status Report and the TSCA Test Submission System were maintained and are available to the public. Conversion of the Chemical Substances Information Network (CSIN) to a microcomputer environment was completed and the CSIN microsoftware was made available through the National Technical Information Service in September 1985.

## CHEMICAL TESTING

### 1987 Program Request

The Agency requests a total of \$7,920,800 supported by 86.0 total workyears for this program, of which \$3,912,500 will be for the Salaries and Expenses appropriation and \$4,008,300 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$188,000 and a decrease of \$688,900 respectively, and no change in total workyears. The increase in Salaries and Expenses results from higher anticipated operating costs. The decrease in Abatement, Control and Compliance is a result of changes in the test rule development process.

In 1987, the Agency will emphasize streamlined, enforceable actions designed to get testing underway as quickly as possible. Test data development activities will include: publication of initial testing decisions on eight chemicals from the 17th and 18th ITC lists and one ITC recommended chemical from the 14th list. Another 19 testing actions will be issued -- 15 will be final rules requiring testing to begin. We will continue toward final test rulemaking action on two non-ITC chemicals--diethylene glycol butyl ether and dioxins and dibenzofurans.

We will begin test rule development on the category of glycol ethers. Testing will fill data gaps identified by the Existing Chemical Review program and necessary for risk assessment and regulatory purposes. We will also continue preliminary work on an exposure-based test rule that will require health effects testing of certain high-exposure chemicals identified through the Agency's human monitoring program.

By the end of 1987, test rules will have been promulgated on 17 ITC chemicals. As final test rules are published, the Agency will continue to process applications for exemptions from testing. We will also continue to conduct data and laboratory audit activities to ensure that TSCA test data are reliable and scientifically sound. Support to other EPA programs will be provided as priority testing requirements are identified. In addition, TSCA Section 4 rulemaking records and industry submissions will be shared with other EPA offices. The guidelines program will continue at the level established in 1986. Data development activities will be initiated for chemicals on the 19th and 20th ITC lists.

## 1986 Program

In 1986, the Agency is allocating a total of \$8,421,700 supported by 86.0 total workyears for this program, of which \$3,724,500 is from the Salaries and Expenses appropriation and \$4,697,200 is from the Abatement, Control and Compliance appropriation.

The Agency is considering the use of consent agreements as an enforceable alternative to test rules. Such agreements would be used where a consensus on testing requirements exists among EPA, manufacturers and/or processors, and interested members of the public. In such circumstances, consent agreements can expedite the initiation of testing while providing safeguards equivalent to those that would apply under test rules. The consent agreements would assure that sanctions could be imposed under TSCA's penalty provisions if agreed-upon testing were not performed and will trigger other key TSCA provisions, similar to a test rule.

A high level of testing activity is planned. During the year, data development activities are being initiated for chemicals included on the 17th and 18th ITC lists. Responses to the seven chemicals on the 15th ITC list were published between August and November 1985 with test rules being proposed for five of those chemicals; initial testing decisions will be issued in May 1986 on the 16th ITC list which includes five chemicals. Another 15 testing actions will be issued -- two will be final rules requiring testing to begin; the others (from earlier ITC lists) will require another stage of rulemaking. Non-ITC chemical data development activities are continuing on diethylene glycol butyl ether, and dioxins and dibenzofurans. For the first time, the authority of Section 4 is being used to propose priority testing for another EPA program in support of land disposal restrictions under the 1984 Amendments to the Resource Conservation and Recovery Act. OTS is continuing its participation in data audit activities to ensure that test data are reliable and scientifically sound.

Test guideline activity continues at the 1985 level with publication of several additional chemical fate and environmental effects test methods expected. Four new guidelines, under development since 1984, are being published on site-specific and generic microcosm methodologies.

## 1985 Accomplishments

In 1985, the Agency obligated a total of \$12,772,900 supported by 109.0 total workyears, of which \$5,095,000 was from the Salaries and Expenses appropriation and \$7,677,900 was from the Abatement, Control and Compliance appropriation.

During 1985, testing actions were taken on a total of 23 chemicals. Initial decisions included four chemicals on the 13th ITC list and five chemicals on the 14th ITC list; testing will be required on four of the nine chemicals. Post initial and final decisions included eleven actions: three proposed and eight final. The Agency also acted on carbofuran intermediates, recommended by the ITC in its 11th list but not designated for response within one year; a decision not to require testing was published. One non-ITC testing action was published: an advance notice of proposed rulemaking on diethylene glycol butyl ether, a chemical identified by the Existing Chemical Review program.

During 1985, EPA amended its two-phase rulemaking procedures to add a streamlined single-phase rulemaking process to expedite the development of test rules. This approach has several advantages--it shortens the rulemaking period to 24 months; expedites initiation of the required testing; eliminates the requirement for industry to submit test protocols for approval; yet preserves the flexibility of the two-phase process by allowing industry to submit alternative test methodologies during the comment period.

Four new chemical fate guidelines were published in 1985. To date, EPA has published a total of 94 test guidelines covering 110 test methods. The annual review of published guidelines resulted in one guideline being updated.

## EXISTING CHEMICAL REVIEW

### 1987 Program Request

The Agency requests a total of \$17,961,200 supported by 178.6 total workyears for this program, of which \$7,856,400 will be for the Salaries and Expenses appropriation and \$10,104,800 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$234,200 and a decrease of \$192,800 respectively, and a decrease of two total workyears. The increase in Salaries and Expenses is a result of higher anticipated operating costs. The decrease in Abatement, Control and Compliance will be possible through increased use of category evaluations. The reduction in total workyears results from a decrease of 12 total workyears transferred to the Asbestos-in-Schools Program Administration program and an increase of ten total workyears for air toxics, groundwater, and category evaluation activities.

TSCA will be used to support Agency efforts to address groundwater contamination and air toxics. We will determine the feasibility of using TSCA's information collection provisions to obtain data on groundwater contamination by volatile organic chemicals, fertilizers, and waste discharges from septic tanks. The Office of Toxic Substances' modeling expertise will be used to predict areas which are vulnerable to groundwater contamination and to establish data collection priorities for areas most likely to be contaminated. OTS will continue to provide support and expertise to the air toxics strategy by developing site-specific criteria, and revising the acute hazards list and chemical profiles.

In 1987, we will continue to emphasize the chemical category approach to existing chemical problems. Regulatory issues of the past few years highlight the importance and need for the assessment and regulation of chemicals by categories. The issue of new chemical bias (unbalanced scrutiny of new chemicals compared to existing ones) and the issue of how to address the risks posed by use substitutes for regulated existing chemicals stem from regulation on a chemical-by-chemical basis. Category evaluations allow the Agency to examine both the existing and new members of a category simultaneously rather than sequentially and to develop regulatory responses which address both. We will continue our efforts to characterize risks associated with aromatic amines, epoxy resins, and respirable fibers categories; action on two other categories (i.e., a Section 4 test rule on glycol ethers and a Section 5 significant new use rule on acrylates) is planned in the Chemical Testing and New Chemical Review programs.

The existing chemicals program review process will continue to deal with an estimated 85 chemicals in some stage of problem characterization, risk evaluation, and risk management; most of these chemicals will have entered review prior to 1987. About 16 risk management actions are planned in 1987. These include Section 6 control actions, Section 9 referrals, Section 5 significant new use rules and non-regulatory chemical advisories.

TSCA Information gathering authorities will be used to support assessment activities on TSCA chemicals, as well as chemicals of concern to other EPA offices. The Section 8(a) comprehensive assessment information rule (CAIR) will be published in final form. This model rule will provide a comprehensive, standardized reporting capability for all Agency offices. We will continue to identify and coordinate cross-media chemical issues and to utilize TSCA to support other EPA programs and Federal agencies. We will exchange TSCA information with other EPA offices, States, Regions, other Federal agencies, and international organizations. Data base development will include systems for the updated TSCA inventory and for CAIR.

### 1986 Program

In 1986, the Agency is allocating a total of \$17,919,800 supported by 180.6 total workyears for this program, of which \$7,622,200 is from the Salaries and Expenses appropriation and \$10,297,600 is from the Abatement, Control and Compliance appropriation.

The emphasis on dealing with existing chemical problems and the use of category evaluations continues in 1986. Preliminary strategies have been developed on acrylates, aromatic amines, glycol ethers, epoxy resins, and respirable fibers. In 1986, we are implementing some elements of the control strategies for two categories by beginning to draft regulations; strategies for three categories are undergoing further evaluation. The existing chemical program review process continues to look at individual chemicals as they come to our attention through TSCA's screening provisions, maintaining approximately 80-85 chemicals in the process. Risk management activities will focus on regulatory actions under Section 6 or Section 9 on glycol ethers, metalworking fluids, formaldehyde, methylene chloride, and on the public and commercial uses of asbestos. Section 5 significant new use rules and chemical advisories are planned on several other chemicals.

Broad use of TSCA's information gathering authorities will continue. The Agency plans to finalize the Section 8(d) rule supporting information needs of the Office of Solid Waste. The comprehensive assessment information rule (CAIR) is being proposed under Section 8(a) of TSCA allowing the Agency to move closer to its goal of a model reporting rule. Standardized reporting under this rule will not only minimize new rule development but will reduce duplicative efforts and industry reporting burden. The TSCA inventory update rule is being finalized and will require manufacturers/importers of chemical substances to report current production volume and plant site data on a critical portion of the chemicals included on the TSCA chemical inventory. One of the major attributes of this rule is that it requires both initial and recurring reporting -- an updating mechanism not included in the original inventory reporting rule. Broad-based monitoring will identify existing chemicals with widespread human exposure.

Salaries and Expenses and total workyear costs for Asbestos-in-Schools Program Administration, described elsewhere under Toxic Substances Financial Assistance, are budgeted in this program.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$16,716,300 supported by 171.6 total workyears for this program, of which \$7,116,500 was from the Salaries and Expenses appropriation and \$9,599,800 was from the Abatement, Control and Compliance appropriation.

During the year, the Agency undertook a number of new initiatives designed to improve and refine its information gathering and risk evaluation capabilities, and to address several significant hazards to human health and the environment. TSCA data and expertise played a key role in the Agency's air toxics strategy by preparing criteria, an illustrative list of acutely toxic substances, chemical-specific profiles and guidance to local communities for evaluating and responding to accidental releases. A rule was proposed under TSCA Section 8(d) to acquire health and safety studies from industry for use by the Office of Solid Waste; this marks the first time a TSCA rule was written specifically to collect information for another program. The Agency proposed a Section 8(a) rule that would require manufacturers/importers of chemical substances to report current production volume and plant site data on a critical portion of the more than 63,000 chemicals included on the TSCA Chemical Inventory. The proposed rule represents the first update of the inventory's production data since 1977.

Other major risk evaluation activities in 1985 focused on a Section 4(f) priority review of methylene chloride and a regulatory investigation of formaldehyde. Risk assessment documents were prepared on six potentially hazardous chemicals. During 1985, 83 chemicals were subjected to the existing chemical program review process. Of that number, 21 were dropped, seven were referred for information gathering, 11 were referred for risk management, and 48 are undergoing further evaluation. Risk management activities in 1985 resulted in TSCA Section 6 actions or Section 9 referrals on polychlorinated biphenyls, asbestos abatement, methylenedianiline (4,4'-MDA) and 1,3-butadiene. We also proposed Section 5 significant new



use rules to monitor the future use of 4,4'-methylenebis(2-chlorobenzeneamine) (MBOCA) and hexachloronorborene (HEX-BCH). The Agency issued chemical advisories on two chemicals, and continued work on glycol ethers and metalworking fluids.

Salaries and Expenses and total workyear costs for the Asbestos-in-Schools Program Administration, described elsewhere under the Toxic Substances Financial Assistance, are budgeted in this program.

## NEW CHEMICAL REVIEW

### 1987 Program

The Agency requests a total of \$16,280,400 supported by 209.6 total workyears for this program, of which \$9,043,300 will be for the Salaries and Expenses appropriation and \$7,237,100 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$381,600 and a decrease of \$72,200 respectively, and no change in total workyears. The increase in Salaries and Expenses is a result of anticipated higher operating costs. The decrease in Abatement, Control and Compliance will be possible through streamlining of the PMN process.

EPA will continue to subject all new chemicals to a thorough review (premanufacture notification, or PMN) to ensure that any unreasonable health and environmental risks are adequately controlled. In 1987, EPA will review approximately 1,800 new chemical notices of which 300 are eligible for an abbreviated review as defined in the polymer, low volume, and test market exemptions. About 120 of the PMN chemicals will require some form of control (testing, exposure controls, withdrawal of PMN's). Test data will be arriving as a result of Section 5(e) actions. There will be increased attention to coordination of reviews and actions with other programs to ensure that decisions are consistent across the Agency and that future environmental problems (e.g., air, water, disposal) are effectively prevented. Close coordination with the Existing Chemical Review Program will also be an integral part of all new chemical decisions.

In 1987, we will continue emphasis on ensuring that risks do not develop as new chemicals enter the marketplace. We will publish proposed or final significant new use rules (SNURs) or Section 8(a) reporting rules for 25 new chemicals. We will focus on chemicals that are the subject of Section 5(e) orders, and other new chemicals that present toxicity characteristics which warrant follow-up. The program will continue to stress more efficient regulatory approaches including category follow-up rules. Two category SNURs will be prepared during 1987. The practice of issuing advisory circulars that provide guidance to industry on new chemical requirements and policies will continue. We will also continue to implement the Agency's policy on biotechnical substances and work closely with other parties to provide for the coordinated review of biotechnical substances. The Structure-Activity Relationship (SAR) study will be continued. Testing is expected to take three years; therefore, analysis of the results of this study will not be ready until June 1988.

The Agency plans to initiate studies on regulatory, operational, and administrative issues related to instituting fees for this program in 1987. The fees will not affect the Budget Authority described for this program in 1987.

### 1986 Program

In 1986, the Agency is allocating a total of \$15,971,000 supported by 209.6 total workyears for this program, of which \$8,661,700 is from the Salaries and Expenses appropriation and \$7,309,300 is from the Abatement, Control and Compliance appropriation.

The workload of this program increased dramatically in 1985 but is expected to stay relatively level in 1986. Productivity improvements in the program have allowed us to keep up with workload demand. In 1986, we anticipate receiving 1,800 new chemical notices of which approximately 120 will require some form of Agency control, either voluntary or formal; 300 actions will receive an abbreviated review under the polymer and low volume exemption rules promulgated in 1985; and we expect to review and act on 60 test market exemption requests. In 1986, EPA will issue a final policy statement concerning the applicability of TSCA to biotechnology products.

The follow-up of new chemicals remains an important part of the program. We will issue chemical-specific significant new use rules (SNURs) for 25 new chemical substances subject to Section 5(e) orders as well as certain other chemicals that may present toxicity characteristics that warrant follow-up. We will propose the first generic follow-up rule to cover a category of chemicals (acrylates). The acrylate category rule will follow the same procedures for case-by-case Section 5(e) orders and the established process for follow-up SNURs. These broader rules will improve the efficiency of the follow-up program and allow industry to begin follow-up procedures more quickly. In 1986, the first new chemical advisory circulars will be published to provide guidance to industry on the new chemical program requirements or policies such as data requirements for categories of chemicals.

A study is being conducted to determine if the Structure Activity Relationship (SAR) technique is an accurate predictor of a chemical's potential toxicity. SAR is the process by which the Agency uses chemical fate and biological effects data on structurally related chemicals to estimate hazards of PMN chemicals under review. EPA currently receives toxicity data on less than 50 percent of all PMNs submitted, and these data most commonly consist of acute toxicity studies. Since we do not have chronic toxicity data, EPA relies on SAR techniques to assess hazards. The SAR study will test the chronic toxicity of 100 substances and compare the results with the SAR judgments that were made when the substances underwent PMN review.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$14,169,400 supported by 207.0 total workyears for this program, of which \$8,634,700 was from the Salaries and Expenses appropriation and \$5,534,700 was from the Abatement, Control and Compliance appropriation.

This program experienced a dramatic workload increase in 1985 (nearly 1,800 notices vs. the 1,200 expected). Ongoing efforts to improve our review process and other productivity increases enabled us to meet this demand. Of the 1,787 notices received in 1985, 66 were test market exemption applications, of which 60 were granted and 6 denied; another 243 notices were submitted under the polymer and low volume exemption procedures established early this year.

In 1985, the Agency made a concerted effort to increase the quantity and quality of toxicity data on new chemicals suspected of presenting unreasonable risks. The Agency asks for testing before production begins if the testing can be done quickly and without unreasonable expense. EPA also asks for preproduction testing if the potential risk cannot be adequately controlled pending availability of the data. However, if the potential risk can be controlled, EPA issues "delayed trigger" testing orders under section 5(e) which require submission of test data only when production of the chemical reaches a predetermined volume.

EPA also implemented two final rules to exempt certain chemicals from full PMN notice and review requirements; one rule applied to certain polymers and to esters manufactured solely from a list of approved reactants; the second rule exempted chemicals that are produced in small amounts (i.e., less than 1,000 kg/yr). Under both exemption rules, eligible polymers and low volume chemicals are now subject to a shortened 21-day review period and to abbreviated notice requirements. We continued to monitor new chemicals that may be of concern if their uses change, or

if production volumes significantly increase from those estimated during their initial review. During the year, EPA proposed 10 SNURs covering 19 new chemicals and promulgated seven SNURs covering 12 chemicals to regulate the manufacture, import, or processing of a chemical subject to a SNUR.

Work on biotechnology advanced during 1985. EPA published a proposed policy statement clarifying the applicability of TSCA and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) to new microorganisms produced through biotechnology and used commercially.



# Enforcement



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# TOXIC SUBSTANCES

## Toxic Substances Enforcement

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
(DOLLARS IN THOUSANDS)								
PROGRAM								
-----								
Toxic Substances Enforcement								
Salaries & Expenses	\$5,748.3	\$6,707.6	\$6,651.4	-\$285.9	\$6,365.5	\$6,672.4	\$306.9	
Abatement Control and Compliance	\$1,253.9	\$2,325.5	\$2,325.5	-\$100.0	\$2,225.5	\$1,825.5	-\$400.0	
TOTAL	\$7,002.2	\$9,033.1	\$8,976.9	-\$385.9	\$8,591.0	\$8,497.9	-\$93.1	
Toxic Substances Enforcement Grants								
Abatement Control and Compliance	\$1,500.0	\$2,300.0	\$2,300.0	-\$98.9	\$2,201.1	\$2,200.0	-\$1.1	
TOTAL	\$1,500.0	\$2,300.0	\$2,300.0	-\$98.9	\$2,201.1	\$2,200.0	-\$1.1	
TOTAL:								
Salaries & Expenses	\$5,748.3	\$6,707.6	\$6,651.4	-\$285.9	\$6,365.5	\$6,672.4	\$306.9	
Abatement Control and Compliance	\$2,753.9	\$4,625.5	\$4,625.5	-\$198.9	\$4,426.6	\$4,025.5	-\$401.1	
Toxic Substances Enforcement	TOTAL	\$8,502.2	\$11,333.1	\$11,276.9	-\$484.8	\$10,792.1	\$10,697.9	-\$94.2
PERMANENT WORKYEARS								
-----								
Toxic Substances Enforcement	142.8	158.0	162.6		162.6	162.6		
TOTAL PERMANENT WORKYEARS	142.8	158.0	162.6		162.6	162.6		



# TOXIC SUBSTANCES

## Toxic Substances Enforcement

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
----- (DOLLARS IN THOUSANDS) -----							
TOTAL WORKYEARS							
-----							
Toxic Substances Enforcement	158.4	168.7	175.6		175.6	175.6	
TOTAL WORKYEARS	158.4	168.7	175.6		175.6	175.6	

## TOXIC SUBSTANCES

### Toxic Substances Enforcement

#### Budget Request

The Agency requests a total of \$10,697,900 supported by 175.6 total workyears for 1987, a decrease of \$94,200 and no change in total workyears from 1986. Included in this total is \$6,672,400 for the Salaries and Expenses appropriation, and \$4,025,500 for the Abatement, Control and Compliance appropriation, an increase of \$306,900 and a decrease of \$401,100 respectively.

#### Program Description

This subactivity supports all compliance monitoring and compliance assistance activities under the Toxic Substances Control Act (TSCA), including support for regulation development, Regional compliance monitoring and case development, Regional polychlorinated biphenyls (PCB) disposal permitting efforts, and management and oversight of State grant programs.

Toxic Substances Enforcement -- The Toxic Substances Enforcement program ensures compliance with TSCA and related rules and regulations. Headquarters and Regional offices play distinct but complementary roles in the program's operation. Headquarters provides enforcement support to the TSCA regulatory development process; designs, implements, and oversees compliance monitoring activities by developing guidance, strategies and procedures; and provides technical compliance assistance and technical support to case development and prosecution activities. Headquarters also manages the laboratory data integrity program. This program involves inspections of laboratories that perform toxic substances testing and in-depth audits of test studies submitted to the Agency under TSCA testing programs.

Regional offices respond to special risk situations; inspect facilities that manufacture, process, distribute or use new or specifically regulated chemicals; and monitor laboratories performing tests pursuant to TSCA testing rules or voluntary testing agreements. Regional offices also assist the regulated community in complying with all applicable TSCA regulations and seek voluntary remedial action in lieu of enforcement prosecution where appropriate. In cases where voluntary compliance is not achieved, Regional personnel prepare and issue notices of violation and administrative orders. The enforcement program assists and supports the Office of Enforcement and Compliance Monitoring (OECM) in the development of civil and criminal referrals.

Toxic Substances Enforcement Grants -- This program provides financial assistance to State agencies to develop and operate toxic substances compliance monitoring programs, in cooperation with the Environmental Protection Agency, especially in the area of control of PCB and asbestos. This program permits wider coverage of the regulated community without requiring additional Federal personnel.

#### TOXIC SUBSTANCES ENFORCEMENT

##### 1987 Program Request

The Agency requests a total of \$8,497,900 supported by 175.6 total workyears for this program, of which \$6,672,400 will be for the Salaries and Expenses appropriation and \$1,825,500 will be for the Abatement, Control and Compliance appropriation. This represents an increase of \$306,900 for the Salaries and Expenses appropriation and a decrease of \$400,000 for the Abatement, Control and Compliance appropriation and no change in total workyears. The increase in Salaries and Expenses represents increased staff support and the decrease in Abatement, Control and Compliance is possible because of lower requirements for asbestos-in-schools compliance inspections.

In 1987, the Toxic Substances Enforcement program will continue to emphasize case development and providing technical assistance to improve levels of compliance. The case development workload will remain high as a result of State programs started in 1985 and becoming more active in 1986 and 1987. Compliance assistance involves alerting the regulated community of EPA regulatory actions and providing advice and direct assistance to industry in its efforts to come into compliance with TSCA rules.

In 1987, the Regional offices will maintain inspection levels of facilities subject to regulations for PCB marking and disposal and the PCB ban. Inspection resources will be directed to those industries that have exhibited high violation rates of the PCB regulations.

The Regions will conduct follow-up or supplemental inspections in support of the asbestos-in-schools rule, although most asbestos-in-schools compliance monitoring inspections will be conducted through a contractor. This funding will support reviews of records maintained by local education agencies to ensure inspections are conducted to detect friable asbestos. The Regions will also continue to inspect for compliance with the asbestos worker protection rule in States where the Occupational Safety and Health Administration does not inspect. Finally, technical assistance and training in asbestos abatement efforts will be provided for State and local government personnel and for owners and managers of public and commercial buildings.

The Regional offices will conduct 1) good laboratory practice (GLP) and test rule inspections, 2) inspections to determine compliance with new chemical regulations, 3) inspections under the TSCA reporting requirements, 4) import inspections, and 5) export inspections. The Regional offices will provide management and oversight of compliance monitoring activities of those States participating in the TSCA State cooperative agreement program. The Regional offices will be responsible for the review and approval of PCB landfills and unique design stationary PCB incinerators, PCB disposal site monitoring and liaison activities (e.g., public hearings) associated with PCB disposal. The Office of Toxic Substances will issue permits to all chemical and biological destruction systems, all mobile incinerators, and all stationary PCB incinerators that are not of a unique design.

Headquarters staff will participate in TSCA rulemaking activities and will develop compliance strategies and enforcement response policies for each new regulation. Headquarters will provide support for Regional compliance monitoring, voluntary compliance assistance, and case development activities under Sections 4, 5, 6, 8, 12 and 13. Headquarters will continue to manage the overall program through appropriate guidance and Regional reviews, including on-sight program evaluations. Headquarters will also be responsible for managing the extramural funding of compliance monitoring inspections in support of the asbestos-in-schools rule. The Toxic Substances Enforcement program will also prepare and issue notices of violation and administrative orders and will provide technical assistance and support to OECM in the prosecution of civil and criminal cases as warranted.

#### 1986 Program

In 1986, the Agency is allocating a total of \$8,591,000 supported by 175.6 total workyears, of which \$6,365,500 is from the Salaries and Expenses appropriation and \$2,225,500 is from the Abatement, Control and Compliance appropriation.

The Regional program inspects for compliance and provides direct assistance to firms seeking to comply voluntarily with TSCA requirements. Where violations are detected, EPA will encourage firms to take specific remedial actions to achieve compliance. If compliance is not achieved, Regional offices prepare and issue notices of violation and administrative orders, and will develop and prosecute cases, as warranted. The Agency will give priority to situations involving substantial threats to human health and the environment.

The Regional offices conduct inspections to determine compliance with Section 4 testing; Section 5 new chemical regulations; Section 6 chemical control rules including PCB marking and disposal, the PCB ban, asbestos-in-schools rule, and other enforceable rules; Section 8 reporting rules; Section 12 export requirements; and Section 13 import requirements. In the asbestos area, technical assistance and training in asbestos abatement efforts are being provided for State and local government personnel and for owners and managers of public and commercial buildings. Regional offices provide oversight and management for the State grant program. The Regional offices also are responsible for PCB site disposal monitoring, liaison functions associated with PCB disposal, and the review and approval of PCB landfills and unique-design stationary PCB incinerators.

Headquarters manages and executes national programs to monitor compliance with test rules and voluntary testing agreements under Section 4, new chemical regulations under Section 5, Section 6 chemical control rules, Section 8 reporting regulations, Section 12 export notice requirements, and Section 13 import requirements. Headquarters is responsible for managing the extramural funding of compliance monitoring inspections under the asbestos-in-schools program. Headquarters also participates in regulation development directed by the Office of Toxic Substances.

### 1985 Accomplishments

In 1985, the Agency obligated \$7,002,200 supported by 158.4 total workyears, of which \$5,748,300 was from the Salaries and Expenses appropriation and \$1,253,900 was from the Abatement, Control and Compliance appropriation. Extramural funds provided compliance inspection support, chemical analysis of samples, and data processing support.

Regional staff responded to special risk incidents, inspected PCB establishments, conducted compliance monitoring activities to support Section 5 premanufacture notification review and Section 8(e) substantial risk notification, and developed and prosecuted enforcement cases upon detection of serious violations, including those originating from State-conducted inspections. The Agency issued administrative orders in 733 cases, and issued 1,136 notices of warning. The Agency also referred two criminal and six civil cases to the Department of Justice.

Headquarters prepared compliance monitoring strategies for the revised Section 6 PCB rule, amended Section 6 PCB Transformer Fires rule, TSCA Environmental Monitoring update, FIFRA and TSCA Good Laboratory Practices (GLPs) rule, and the Section 6 Asbestos Worker Protection rule. The Headquarters compliance monitoring staff developed enforcement response policies for TSCA Good Laboratory Practices requirements and the Section 6 Asbestos Worker Protection rule. Headquarters also amended enforcement response policies for Section 5 new chemicals requirements, Section 6 Asbestos-in-Schools rule, and Section 8(a) recordkeeping and reporting requirements.

### TOXIC SUBSTANCES ENFORCEMENT GRANTS

#### 1987 Program Request

The Agency requests a total of \$2,200,000 for this program, all for the Abatement, Control and Compliance appropriation. This represents a decrease of \$1,100. The decrease reflects lower expected needs in the States.

This grant will be included in a legislative proposal for block grants designed to give States more flexibility and autonomy in administering environmental programs. In 1987, we expect States to continue the following activities.

EPA will support toxic substances compliance monitoring programs in 17 participating States. The State programs will emphasize chemical control rules, particularly compliance monitoring of PCBs and asbestos.

#### 1986 Program

In 1986, the Agency is allocating a total of \$2,201,100 to this program, all from the Abatement, Control and Compliance appropriation. These funds support State-conducted toxic substances compliance monitoring programs in 17 States. These State programs concentrate upon chemical control rules under Section 6, in particular PCB and asbestos compliance monitoring.

#### 1985 Accomplishments

The Agency obligated a total of \$1,500,000 for this program, all from the Abatement, Control and Compliance appropriation. These funds supported State cooperative enforcement agreement programs in 15 States. These States conducted 463 PCB inspections and 133 asbestos-in-schools inspections.



# Energy





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# ENERGY

ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
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(DOLLARS IN THOUSANDS)

## APPROPRIATION

Salaries & Expenses	\$6,470.2	\$5,454.1	\$5,129.8	-\$220.5	\$4,909.3	\$5,486.4	\$577.1
Research & Development	\$50,342.3	\$61,863.2	\$56,577.9	-\$2,433.8	\$54,144.1	\$54,103.0	-\$41.1
TOTAL, Energy	\$56,812.5	\$67,317.3	\$61,707.7	-\$2,654.3	\$59,053.4	\$59,589.4	\$536.0

PERMANENT WORKYEARS	94.1	89.2	88.4		88.4	77.2	-11.2
TOTAL WORKYEARS	105.7	97.7	97.0		97.0	85.8	-11.2

OUTLAYS	\$41,692.6	\$58,659.6	\$62,301.4	-\$857.3	\$61,444.1	\$61,349.2	-\$94.9
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AUTHORIZATION LEVELS  
 Authorization for Energy is under the Research and Development Act, which expired September 30, 1981, and reauthorization is pending.

## OVERVIEW AND STRATEGY

The Multi-media Energy research and development program provides the scientific information necessary to guide the development and utilization of energy resources in an environmentally acceptable manner. This program includes three major program areas: 1) acid deposition; 2) Limestone Injection Multistage Burner (LIMB) control technology; and 3) alternate energy (synthetic fuels) development.

### Acid Deposition

The acid deposition research program represents the Agency's part of the National Acid Precipitation Assessment Program which is mandated by the Energy Security Act of 1980 (Title VII of P.L. 96-294). Its purpose is to increase the understanding of the causes and effects of acid deposition so that reliable information can be made available to policy-makers in support of their efforts to determine what measures should be taken to resolve the acid deposition problem.

The 1987 program will continue to expand the basic research that will provide better information on the physical and chemical mechanisms, and the deposition processes, that govern the acid deposition phenomenon. Major emphasis will be placed on the development and evaluation of atmospheric models. This research will enable policy-makers to predict changes in deposition levels that result from emission reductions in nearby or distant sources.

The 1987 program will also expand the scope of research on materials damage. Recent scientific information indicates that the effects of acid deposition on materials may be significant. In 1987, EPA will conduct field and laboratory research to quantify more precisely the potential economic impact of damage to materials due to acid deposition. For example, brick, mortar, concrete, roofing materials and building sealants will be added to the EPA field testing program.

A third area of major emphasis will be enhanced research on aquatic effects. In 1987, EPA will enhance research that seeks to quantify the effects of acidification on aquatic systems through the development of dose/response relationships. Major emphasis in 1987 will be placed on completing the National Surface Water Survey (NSWS). This effort has involved sampling the chemistry and biology of lakes and streams throughout the United States to assess the status of acidification of surface waters.

### LIMB Control Technology

The LIMB control technology program is designed to develop and demonstrate effective and inexpensive emission control systems that will simultaneously remove sulfur oxides ( $\text{SO}_x$ ) and nitrogen oxides ( $\text{NO}_x$ ) from boiler flue gases of new and existing pulverized coal-fired boilers. This research and development program will continue to provide data on performance, reliability, and cost efficiency to accelerate the commercial availability of the technology in both wall-fired and tangentially-fired applications.

### Synthetic Fuels

In 1987, EPA will eliminate the synthetic fuels research program. This program currently focuses on providing special studies on synfuel specific processes for EPA regulatory offices and States in the development of Environmental Impact Statements, permit applications and monitoring plans. These synfuels studies reflect research associated with projects sponsored by the U.S. Synthetic Fuels Corporation (SFC). Since the SFC will be eliminated in 1986, EPA's research role in this area will be completed.



# **Research and Development**



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## ENERGY

## Multi-Media Energy

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
Acid Rain - Multi-Media							
- Energy							
Salaries & Expenses	\$3,508.9	\$3,094.1	\$3,107.1	-\$133.6	\$2,973.5	\$4,000.0	\$1,026.5
Research & Development	\$34,450.5	\$57,512.5	\$47,837.6	-\$2,058.0	\$45,779.6	\$51,133.0	\$5,353.4
TOTAL	\$37,959.4	\$60,606.6	\$50,944.7	-\$2,191.6	\$48,753.1	\$55,133.0	\$6,379.9
Health Effects - Multi-Media - Energy							
Salaries & Expenses	\$378.4						
Research & Development	\$786.4						
TOTAL	\$1,164.8						
Environmental Engineering & Technology - Multi-Media - Energy							
Salaries & Expenses	\$2,582.9	\$2,360.0	\$2,022.7	-\$86.9	\$1,935.8	\$1,486.4	-\$449.4
Research & Development	\$14,705.4	\$3,950.7	\$8,540.3	-\$367.2	\$8,173.1	\$2,970.0	-\$5,203.1
TOTAL	\$17,288.3	\$6,310.7	\$10,563.0	-\$454.1	\$10,108.9	\$4,456.4	-\$5,652.5
Environmental Processes & Effects - Multi-Media - Energy							
Research & Development	\$400.0	\$400.0	\$200.0	-\$8.6	\$191.4		-\$191.4
TOTAL	\$400.0	\$400.0	\$200.0	-\$8.6	\$191.4		-\$191.4
TOTAL:							
Salaries & Expenses	\$6,470.2	\$5,454.1	\$5,129.8	-\$220.5	\$4,909.3	\$5,486.4	\$577.1
Research & Development	\$50,342.3	\$61,863.2	\$56,577.9	-\$2,433.8	\$54,144.1	\$54,103.0	-\$41.1
Multi-Media Energy TOTAL	\$56,812.5	\$67,317.3	\$61,707.7	-\$2,654.3	\$59,053.4	\$59,589.4	\$536.0



## ENERGY

## Multi-Media Energy

ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
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(DOLLARS IN THOUSANDS)

## PERMANENT WORKYEARS

Acid Rain - Multi-Media - Energy	50.9	56.0	55.2		55.2	55.2
Health Effects - Multi- Media - Energy	4.8					
Environmental Engineering & Technology - Multi- Media - Energy	38.4	33.2	33.2	33.2	22.0	-11.2
TOTAL PERMANENT WORKYEARS	94.1	89.2	88.4	88.4	77.2	-11.2

## TOTAL WORKYEARS

Acid Rain - Multi-Media - Energy	58.9	60.0	60.0	60.0	60.0	
Health Effects - Multi- Media - Energy	4.8					
Environmental Engineering & Technology - Multi- Media - Energy	42.0	37.7	37.0	37.0	25.8	-11.2
TOTAL WORKYEARS	105.7	97.7	97.0	97.0	85.8	-11.2

## ENERGY

### Multi-media Energy

#### Principal Outputs by Objective

##### 1987 PLANNED OUTPUTS

=====

##### Objective 1: Estimate Emissions from Man-made Sources

- o A 1985 emissions inventory for use with the Regional Acid Deposition Model (Acid Rain)

##### Objective 2: Understand Atmospheric Processes

- o Field studies to improve our confidence in the Regional Acid Deposition Model (Acid Rain)

##### Objective 3: Establish Deposition Monitoring Data Bases

- o An expanded dry deposition network of approximately 40-50 sites (Acid Rain)

##### Objective 4: Understand and Quantify Aquatic Effects

- o A report on results of the Western Lake Survey (Acid Rain)
- o A report on "Direct/Delayed Response" of water bodies to acid deposition inputs (Acid Rain)

##### Objective 5: Understand and Quantify Terrestrial Effects

- o A report on the association of acid deposition and its precursors with the decline in forest productivity in high altitude forests (Acid Rain)

##### Objective 10: Develop and Evaluate LIMB Control Technology

- o A report on LIMB engineering studies as they relate to commercialization requirements for industry (Env. Technology)
- o A report on pilot-scale tests to evaluate LIMB sorbent injection parameters for boiler applications (Env. Technology)

##### 1986 PLANNED OUTPUTS

=====

##### Objective 1: Estimate Emissions from Man-made Sources

- o An improved 1985 man-made emissions inventory (Acid Rain)

##### Objective 2: Understand Atmospheric Processes

- o A cloud chemistry network to cover the major high altitude forest systems in the eastern United States (Acid Rain)

##### Objective 3: Establish Deposition Monitoring Data Bases

- o A dry deposition monitoring network (30 sites) based on the 1985 pilot network (Acid Rain)

Objective 4: Understand and Quantify Aquatic Effects

- o A full stream sampling study as part of the National Surface Water Survey (Acid Rain)
- o A report on the analysis of long-term monitoring data (Acid Rain)

Objective 5: Understand and Quantify Terrestrial Effects

- o A final report on reduced annual incremental growth in trees (Acid Rain)
- o A progress report on spruce/fir forest effects (Acid Rain)

Objective 8: Assess Research Results and Data to Provide Information for Policy Analysis

- o A report on the 1985 Assessment and deposition phenomenon (Acid Rain)

Objective 10: Develop and Evaluate LIMB Control Technology

- o A report documenting site specific design for the wall-fired field demonstration (Env. Technology)
- o A report on the effects of coal sulfur, trace ash species evaluation, and promoters for sulfur capture (Env. Technology)

1985 ACTUAL OUTPUTS

=====

Objective 1: Estimate Emissions from Man-made Sources

- o A comprehensive 1980 emissions inventory (Acid Rain)
- o A report on Historical Emissions Trends, 1900-1980 (Acid Rain)

Objective 2: Understand Atmospheric Processes

- o The establishment of the eastern mountain top monitoring stations (Acid Rain)

Objective 3: Establish Deposition Monitoring Data Bases

- o A report on prototype dry deposition monitors (Acid Rain)
- o A siting plan for the dry deposition monitoring network (Acid Rain)

Objective 4: Understand and Quantify Aquatic Effects

- o Final reports on primary analyses of data from eastern lake component of the National Surface Water Survey (Acid Rain)
- o A multi-regional survey of watershed sensitivity (Acid Rain)

Objective 5: Understand and Quantify Terrestrial Effects

- o A joint research project with the U. S. Forest Service on the forest decline syndrome in northeastern and southeastern forests (Acid Rain)

Objective 8: Assess Research Results and Data to Provide Information for Policy Analysis

- o A Critical Assessment Document on the acid deposition phenomenon (Acid Rain)
- o A report on the inventory of National Acid Precipitation Assessment Program research projects (Acid Rain)

## ENERGY

### Multi-media Energy

#### Budget Request

The Agency requests a total of \$59,589,400 supported by 85.8 total workyears for 1987, an increase of \$536,000 and a decrease of 11.2 total workyears from 1986. Of the request, \$5,486,400 will be for the Salaries and Expenses appropriation and \$54,103,000 will be for the Research and Development appropriation, an increase of \$577,100 and a decrease of \$41,100, respectively.

#### Program Description

The multi-media energy research and development program was designed to provide the scientific and technical information necessary to support the Agency's permitting and standard-setting processes, and to allow for the development and utilization of energy sources in an environmentally acceptable manner. Research is conducted to better understand the phenomenon of acid deposition and provide information upon which mitigation decisions may be made; expand EPA's knowledge of the performance, reliability, and cost of the limestone injection multistage burner (LIMB) control technology; characterize and evaluate synthetic fuels discharges; and evaluate the impacts of energy development in cold climates. The following objectives support these activities:

Objective 1: Estimate Emissions from Man-made Sources. This research improves our understanding of the relationships among emissions resulting from man's activities.

Objective 2: Understand Atmospheric Processes. This research improves our capability to examine and predict the transport, chemical transformation, and deposition processes of air masses.

Objective 3: Establish Deposition Monitoring Data Bases. This work will quantify wet and dry deposition of acidic materials with sufficient resolution to establish trends; provide inputs to effects studies; and, provide information for source/receptor statistical analyses.

Objective 4: Understand and Quantify Aquatic Effects. This work will enable us to quantify the impacts of acidification on representative aquatic systems through the development of dose/response relationships and to apply these data to the development of appropriate mitigative measures.

Objective 5: Understand and Quantify Terrestrial Effects. This research establishes acid deposition dose-response relationships for various wild and cultivated plant species and estimates more accurately material transport through soils to aquatic systems.

Objective 6: Understand and Quantify the Effects on Materials and Cultural Resources. This research will determine how materials are damaged from acid deposition. This includes determining those materials and resources at risk and developing the information required to differentiate the effects of acid deposition from the effects of other natural and man-made sources.

Objective 7: Evaluate Control Technologies. This work will focus on developing "cost of control" tools. Activities will include analysis of both performance and costs of technologies; and the appraisal and development of selected hardware approaches.

Objective 8: Assess Research Results and Data to Provide Information for Policy Analysis. This work is designed to integrate the various aspects of the acid deposition research program and to provide information to decision-makers in a timely manner.

Objective 9: Characterize and Evaluate Synfuel Discharges and Control Technology. This program provides engineering support to EPA regulatory offices, regions, and States in the analysis of synthetic fuel-related environmental risks and in the evaluation of discharges and control technologies.

Objective 10: Develop and Evaluate LIMB Control Technology. This program continues to develop and evaluate an effective and inexpensive emission-control technology that will simultaneously remove sulfur oxides ( $\text{SO}_x$ ) and nitrogen oxides ( $\text{NO}_x$ ) from boiler flue gases of pulverized coal boilers.

Objective 11: Evaluate Impacts of Energy Development in Cold Climates. This research defines the impact of coal, oil and gas development, and atmospheric pollution on arctic and sub-arctic ecosystems.

## ACID RAIN

### 1987 Program Request

The Agency requests a total of \$55,133,000 supported by 60.0 total workyears for this program, of which \$4,000,000 will be for the Salaries and Expenses appropriation and \$51,133,000 will be for the Research and Development appropriation. This represents an increase of \$1,026,500 and \$5,353,400, respectively, and no change in total workyears. The increase in Salaries and Expenses will be used for monitoring equipment for the dry deposition monitoring network. The increase in Research and Development will be used to support research in the following areas: 1) the evaluation of acid deposition atmospheric models; 2) the expansion of research on materials effects; and 3) enhanced research on aquatic effects.

Estimate Emissions from Man-Made Sources. This research examines the relationships among man-made emissions to provide a more accurate estimate of major pollutants related to acid deposition. Research supported in 1987 includes: 1) developing emission inventories; and 2) developing models. These models will be responsive to policy options and used to analyze cost-effective strategies. The work will result in a 1985 emission data base and a final  $\text{SO}_2$ ,  $\text{NO}_2$ , VOC, and alkaline material emissions inventory for use in the Eulerian model.

Understand Atmospheric Processes. The program continues to broaden our understanding of the atmospheric transport, physical and chemical transformation, and deposition processes of pollutants emitted into the atmosphere. The program continues to emphasize model development, the collection of field data, and model evaluation to better differentiate the contribution of local versus distant sources of acid deposition. This research will enable policy-makers to predict changes in deposition levels resulting from reductions in nearby or distant emissions. A major initiative in 1987 involves using field study data to improve our scientific confidence in the Regional Acid Deposition Model (RADM). RADM will be used in a number of important areas (e.g., to calibrate Lagrangian models, to develop control strategies, to perform source-receptor analysis, and to assess materials damage).

Establish Deposition Monitoring Data Bases. Work in this area will quantify wet and dry deposition of acid materials with sufficient resolution to establish cause and effect relationships. The program continues to support the 150 station National Trends Network (NTN) for wet deposition and to build a statistically valid baseline data set to compare various levels of deposition under various control strategies. The initial 30 dry deposition monitoring sites will continue to operate and additional sites will be established. In 1987 additional resources will be used to install monitoring equipment associated with the dry deposition network.

Understand and Quantify Aquatic Effects. Research here seeks to quantify the effects of acidification on representative aquatic systems through the development of dose/response relationships. In 1987 particular program emphasis will be in the following areas: 1) completing Phase II of the NSWS which will sample 200 to 300 lakes in sensitive regions of the U.S. to determine temporal and biologic variability; conducting a synoptic survey of streams in sensitive regions of the U.S.; selecting long-term monitoring sites; 2) formulating predictive regional aquatic chemistry models which incorporate episodic and non-episodic events; 3) developing biological response models for fish populations and other aquatic biota; and 4) continuing research to predict short-, mid-, and long-term responses of surface waters to acidification.

Understand and Quantify Terrestrial Effects. This research seeks to establish acid deposition dose-response relationships for various wild and cultivated plant species and to define more accurately material transport through soils to aquatic systems. In 1987 major activities include: 1) watersheds research to determine chemical input/output processes; 2) site characterization for four forest types under study; 3) correlational studies of pollutants and forest conditions; 4) the initiation of controlled pollutant exposure studies on seedlings and saplings; and 5) surveys of the extent and magnitude of observed forest productivity declines.

Understand and Quantify the Effects on Materials and Cultural Resources. This research will focus on how materials are damaged from acid deposition. Scientific information will be produced for a variety of materials (e.g., metallic surfaces, marble, and concrete). In 1987 damage function research (i.e., defining the unit of deterioration of material for a given level of exposure) will be increased for painted wood, mortar, concrete, roofing materials, and building sealants.

Evaluate Control Technologies. This research will develop "cost of control" analysis tools that will become part of the overall acid deposition assessment framework. The research will continue to focus primarily on assessing the engineering applicability and costs of control technologies for a number of pollutants.

Assess Research Results and Data to Provide Information for Policy Analysis. This program is designed to integrate the various aspects of the acid deposition research activities and to provide information to decision-makers to formulate appropriate decisions for dealing with acid deposition issues on a timely and cost-effective basis. The primary research activities will be to validate assessment techniques and data bases which will be used in acid deposition assessments.

#### 1986 Program

In 1986, the Agency is allocating a total of \$48,753,100 supported by 60.0 total workyears for this program, of which \$2,973,500 is from the Salaries and Expenses appropriation and \$45,779,600 is from the Research and Development appropriation.

The major differences between the 1986 program and the 1985 program include the following: accelerating the development of a high resolution emission inventory for 1985; establishing a forest exposure monitoring network; expanding the dry deposition monitoring network to approximately 30 stations; improving the Regional Acid Deposition Model (RADM) through the evaluation of several of its component modules; expanding the National Surface Water Survey (NSWS) to include a full stream sampling study; accelerating the collaborative research program with the U.S. Forest Service on the effects of acid deposition and other air pollutants on spruce/fir forests in the East, and Southern commercial forests; initiating research on Eastern mixed hardwoods and Western conifers.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$37,959,400 supported by 58.9 total workyears for this program, of which \$3,508,900 was from the Salaries and Expenses appropriation and \$34,450,500 was from the Research and Development appropriation.

During 1985 the acid deposition research program developed a comprehensive 1980 emissions inventory as well as a report on historical emissions trends from 1900 to 1980. The Eastern mountain-top monitoring stations were placed in operation and the program developed a siting plan for the dry deposition monitoring network. A series of reports were completed on data from the Eastern lake component of the NSWS. Additionally, a multi-regional survey of watershed sensitivity was conducted. A joint research project with the U.S. Forest Service was initiated to examine the forest decline syndrome in Northeastern and Southeastern forests. In the assessment area, a Critical Assessment Document on the acid deposition phenomenon was completed.

### HEALTH EFFECTS

#### 1987 Program Request

The Agency requests no resources for this program in 1987.

#### 1986 Program

This program was completed in 1985 and has no resources associated with it in 1986.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,164,800 supported by 4.8 total workyears for this program, of which \$378,400 was from the Salaries and Expenses appropriation and \$786,400 was from the Research and Development appropriation.

During 1985, the energy health effects program was completed with the development of several reports summarizing the results of EPA research conducted through 1984 on health risks associated with synthetic fuels production.

### ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

#### 1987 Program Request

The Agency requests a total of \$4,456,400 supported by 25.8 total workyears for this program, of which \$1,486,400 will be for the Salaries and Expenses appropriation and \$2,970,000 will be for the Research and Development appropriation. This represents a decrease of \$449,400 and \$5,203,100, respectively, and a decrease of 11.2 total workyears. The decrease in total workyears and the Salaries and Expenses appropriation reflects the completion of the Synfuels engineering support program. The decrease in the Research and Development appropriation involves two program areas. First, in 1987, EPA will eliminate the synfuels research program. This program currently focuses on providing special studies on synfuel specific processes sponsored by the U.S. Synthetic Fuels Corporation (SFC). Since the SFC will be eliminated in 1986, EPA's research role in this area will be completed. Second, the decrease in the Research and Development appropriation reflects the continued phase down of the LIMB program associated with EPA's implementation of a full-scale commercial demonstration of this technology.

Develop and Evaluate LIMB Control Technology. Research will continue in three major engineering areas: 1) laboratory and pilot scale development; 2) prototype testing; and 3) commercialization. The pilot scale development effort will continue to emphasize evaluation of LIMB particulate recycle and/or utilization systems. The prototype testing portion will evaluate high activity sorbent injection and economic analyses of the LIMB process. In the commercialization phase, engineering and economic analyses will be performed to determine the applicability of the LIMB process design as a function of boiler design, coal sulfur, and sorbents.

#### 1986 Program

In 1986, the Agency is allocating \$10,108,900 supported by 37.0 total work-years for this program, of which \$1,935,800 is from the Salaries and Expenses appropriation and \$8,173,100 is from the Research and Development appropriation.

During 1986, the environmental engineering and technology program is completing its consulting responsibilities as specified under the Energy Security Act, to assist the U.S. Synthetic Fuels Corporation and its project sponsors in evaluation of monitoring data. With the policy decision to abolish the Corporation, EPA anticipates no further requests for assistance under its Synfuels engineering support program.

In 1986, the LIMB program is continuing laboratory and pilot-scale research, prototype testing, and commercial-scale development. To promote commercialization of the LIMB technology, EPA is co-funding with industry a demonstration of the LIMB technology on a 105 Megawatt pulverized coal-fired boiler using wall-fired burners. The Agency expects to initiate negotiations in 1986 with interested parties to demonstrate the LIMB technology on a commercial-scale boiler using tangentially-fired burners.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$17,288,300 supported by 42.0 total workyears for this program, of which \$2,582,900 was from the Salaries and Expenses appropriation and \$14,705,400 was from the Research and Development appropriation.

During 1985, the Synfuels engineering program provided technical support to EPA regional offices, State and local permitting authorities, in analyzing synthetic fuel-related environmental risks and evaluating discharges and control technologies.

In 1985 EPA awarded a contract to Babcock & Wilcox Co. to develop and conduct a commercial-scale demonstration of the LIMB technology on a wall-fired boiler. The site selected was at the Edgewater Station of the Ohio Edison Company near Lorain, Ohio.

#### ENVIRONMENTAL PROCESSES AND EFFECTS

##### 1987 Program Request

The Agency requests no resources for this program in 1987. This represents a decrease of \$191,400 for the Research and Development appropriation. This program will be completed in 1986.

##### 1986 Program

In 1986, the Agency is allocating a total of \$191,400, all of which is from the Research and Development appropriation.



In 1986, research is being concluded on assessing the impacts of oil and gas development on coastal tundra wetlands. Projects underway include: 1) the health effects of urban air particulates (wood smoke), (2) air dispersion modeling in the arctic, and (3) the ecological impacts of placer mining.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$400,000, all of which was from the Research and Development appropriation. During 1985, the cold climate program conducted research on the impacts of resource development on ecosystems in arctic and sub-arctic regions.



# **Management and Support**



# ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# MANAGEMENT AND SUPPORT

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
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(DOLLARS IN THOUSANDS)							
APPROPRIATION							
Salaries & Expenses	\$287,611.7	\$282,913.3	\$287,922.0	-\$12,381.7	\$275,540.3	\$295,836.8	\$20,296.5
Operations, Research and Facilities	\$151.4						
TOTAL, Management & Support	\$287,763.1	\$282,913.3	\$287,922.0	-\$12,381.7	\$275,540.3	\$295,836.8	\$20,296.5
PERMANENT WORKYEARS	2,548.4	2,564.8	2,617.0		2,617.0	2,581.8	-35.2
TOTAL WORKYEARS	2,869.6	2,860.4	2,889.0		2,889.0	2,832.9	-56.1
OUTLAYS	\$264,338.7	\$282,254.3	\$298,981.1	-\$10,578.7	\$288,402.4	\$294,056.0	\$5,622.2
AUTHORIZATION LEVEL	Authorization is by virtue of the Appropriation Act.						

## MANAGEMENT AND SUPPORT

### OVERVIEW AND STRATEGY

Management and Support provides executive direction and policy oversight for all Agency programs, as well as those administrative and support services that are not assigned to a specific program. We will continue our efforts to provide quality legal services, promote technically and economically defensible regulatory and policy alternatives, enhance the public's perception of the Agency, manage for environmental results, and pursue a focused human resources management effort to build a skilled career environmental workforce.

The major components of this medium are Program Management, Agency Management, Regional Management, and Support Costs.

Program Management includes policy development, program development and oversight, and the associated management activities for the Agency's environmental program offices. These include the Offices of Air and Radiation, Water, Enforcement and Compliance Monitoring, External Affairs, Pesticides and Toxic Substances, General Counsel, Research and Development, and Solid Waste and Emergency Response.

Agency Management includes Agencywide management functions and policy activities.

Policy Direction, through the Executive Offices at Headquarters, consists of the Administrator and Deputy Administrator and their immediate staffs, Regional Operations, Executive Support, Administrator's Representation Fund, International Activities, Civil Rights, Science Advisory Board, Administrative Law Judges, the Regulatory Information Service Center and Small and Disadvantaged Business Utilization.

Policy, Planning and Evaluation is organized into the following components: the Integrated Environmental Management Program and the Offices of Policy Analysis, Standards and Regulations, and Management Systems and Evaluation.

Legal Services for litigation in which the Agency is a defendant are provided to Agency programs by the General Counsel in Headquarters and by a Regional Counsel in each Regional office. The Office of General Counsel (OGC) provides legal services and advice to the Administrator and Agency managers. OGC, in cooperation with the Department of Justice, represents the Agency in all legal matters in which the Agency is a defendant. Additionally, OGC reviews proposed actions, decisions, and regulations to assure that they are legally defensible.

External Affairs activities are performed by five component offices: Legislative Analysis, Congressional Liaison, Public Affairs, Private and Public Sector Liaison, and Federal Activities.

Inspector General activities include investigation and audit of Agency activities to promote efficiency and effectiveness, and to prevent and detect fraud, waste, and abuse.

Administration and Resources Management provides management activities in Headquarters, as well as administrative services to all program operations located in Cincinnati, Ohio and Research Triangle Park, North Carolina. The office has several components: Program Management, Financial Management, Comptroller, Personnel and Organization, Contracts and Grants, Facilities and Management Services, Information Systems and Services, and Human Resources Management.



Regional Management includes the centralized management and administrative functions performed in each Regional office. The Regional elements cover the Regional and Deputy Regional Administrators, their immediate staffs, and Regional staff for public affairs, congressional and intergovernmental relations, and civil rights. Other activities include budget development and execution, preparation of Regional operating plans, legal services, program planning, regulatory and policy analysis, economic analysis, program evaluation, financial and personnel management, information management, and administrative services.

Support Costs include the costs of general support services for all Agency programs. In this diverse category are:

- ° Office and building services, such as library services, commercial telephone use, printing and copying, utilities, security, ADP technical support, and custodial and maintenance services for programs located at Headquarters, Research Triangle Park, and Cincinnati;
- ° Nationwide costs, such as facility rental costs, centralized data processing, professional training, U.S. Postal Service charges, Federal Telecommunications System (FTS) charges, unemployment and workmen's compensation, and health and safety costs for all Agency programs in all locations;
- ° Office and building services for laboratories and field stations operated by the Offices of Air and Radiation, Research and Development, and Pesticides and Toxic Substances; and
- ° Common services in Regional offices, such as supplies and equipment, commercial telephones, printing, facilities operations and maintenance, library services, and mini-computer operations.

#### Program Priorities

Priorities for the Executive Offices in 1987 will include: continued emphasis on enforcement and compliance efforts for both environmental and civil rights regulations; stronger support from Headquarters and Regions to small, minority, and women's environmental businesses; bringing greater scientific credibility to regulatory decision-making through an emphasis on reviews by the Science Advisory Board; and more effective communication between Headquarters and the Regions.

The Office of Policy, Planning and Evaluation will continue to focus resources on managing for environmental results; developing and demonstrating integrated environmental management strategies; and developing improved methods to ascertain benefits of EPA's regulations. It will also support the Agency's Air Toxics initiatives. The common purpose of these efforts is the development of regulatory approaches that achieve environmental and health benefits in an efficient and cost-effective manner.

The Office of General Counsel will continue to provide legal advice and counsel to the Agency's top management and media program offices concerning legal interpretation of EPA administered statutes, other applicable laws, and on such matters as personnel, grants, and contracts. Additionally, the Office of General Counsel will continue to represent the Agency in all major regulatory actions, and ensure that legal errors are avoided and legal positions are presented in the most persuasive manner.

The Office of External Affairs will continue to provide a clear interpretation of EPA's programs and priorities; increase Agency effectiveness by improving Congressional liaison; continue effective liaison with State and local governments; establish outreach programs with the private and public sector and involve citizen participation; reaffirm and strengthen Federal Agency contacts; and provide a cross-media perspective in review of environmental problems.

The Office of Inspector General will continue to emphasize internal and management audits to improve the economy, effectiveness, and efficiency of EPA programs and provide audit coverage to EPA programs and operations which have received little or no audit coverage in the past. It will provide limited audit coverage for the wastewater treatment construction grant program and EPA contracts and other grant programs. The office will continue its investigation of antitrust activities and other construction-related fraud and will aggressively pursue new initiatives to ferret out fraud in the minority business enterprise program and the submission of documentation involving foreign vehicles. It will further its efforts in fraud prevention by publicizing its activities to EPA employees, identifying areas sensitive to fraud, and developing new fraud detection methods.

The Office of Administration and Resources Management will build on progress already achieved in assuring a strong system of financial internal controls, including work toward integration and improvement of all Agency financial management and accounting systems; continue developing a program for better information management planning; pursue a focused human resources management effort to build a skilled career environmental workforce; move to the forefront in achieving significant productivity improvements; and continue to provide essential administrative and support services to enhance the Agency's ability to fulfill its various mandates.

In the Regional management areas, the Agency will continue its commitment to strengthen Regional environmental programs and maintain strong Regional planning and management efforts.

In Support, the program will continue to provide general support services to Agency programs. This request will also enable the Agency to continue its effort to replace obsolete computers in the Regional offices, as well as cover cost escalations such as rent, telephone, and utility rate increases.

# **Program Management**



ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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PROGRAM MANAGEMENT

Program Management

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
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(DOLLARS IN THOUSANDS)

PROGRAM

Program Management -  
Air And Radiation  
Salaries & Expenses

TOTAL	\$2,412.0	\$2,904.0	\$2,904.2	-\$124.9	\$2,779.3	\$2,904.2	\$124.9
	\$2,412.0	\$2,904.0	\$2,904.2	-\$124.9	\$2,779.3	\$2,904.2	\$124.9

Program Management -  
Water  
Salaries & Expenses

TOTAL	\$2,773.1	\$2,743.7	\$2,671.7	-\$114.8	\$2,556.9	\$2,740.6	\$183.7
	\$2,773.1	\$2,743.7	\$2,671.7	-\$114.8	\$2,556.9	\$2,740.6	\$183.7

Program Management -  
Enforcement And  
Compliance Monitoring  
Salaries & Expenses

TOTAL	\$428.5	\$517.6	\$416.0	-\$17.8	\$398.2	\$416.7	\$18.5
	\$428.5	\$517.6	\$416.0	-\$17.8	\$398.2	\$416.7	\$18.5

Program Management -  
External Affairs  
Salaries & Expenses

TOTAL	\$803.6	\$656.0	\$711.8	-\$30.6	\$681.2	\$676.2	-\$5.0
	\$803.6	\$656.0	\$711.8	-\$30.6	\$681.2	\$676.2	-\$5.0

Program Management -  
Pesticides and Toxic  
Substances  
Salaries & Expenses

TOTAL	\$1,998.9	\$2,573.4	\$2,311.1	-\$99.3	\$2,211.8	\$2,216.5	\$4.7
	\$1,998.9	\$2,573.4	\$2,311.1	-\$99.3	\$2,211.8	\$2,216.5	\$4.7

Program Management -  
General Counsel  
Salaries & Expenses

TOTAL	\$368.4	\$458.1	\$458.1	-\$19.6	\$438.5	\$460.7	\$22.2
	\$368.4	\$458.1	\$458.1	-\$19.6	\$438.5	\$460.7	\$22.2

## PROGRAM MANAGEMENT

## Program Management

		ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----								
(DOLLARS IN THOUSANDS)								
PROGRAM								
-----								
Program Management - Research & Development Salaries & Expenses		\$3,919.5	\$3,879.4	\$3,846.5	-\$165.3	\$3,681.2	\$3,773.7	\$92.5
	TOTAL	\$3,919.5	\$3,879.4	\$3,846.5	-\$165.3	\$3,681.2	\$3,773.7	\$92.5
Program Management - Solid Waste and Emergency Response Salaries & Expenses		\$4,199.1	\$1,653.7	\$1,653.7	-\$71.1	\$1,582.6	\$1,670.2	\$87.6
	TOTAL	\$4,199.1	\$1,653.7	\$1,653.7	-\$71.1	\$1,582.6	\$1,670.2	\$87.6
TOTAL: Salaries & Expenses		\$16,903.1	\$15,385.9	\$14,973.1	-\$643.4	\$14,329.7	\$14,858.8	\$529.1
Program Management	TOTAL	\$16,903.1	\$15,385.9	\$14,973.1	-\$643.4	\$14,329.7	\$14,858.8	\$529.1
PERMANENT WORKYEARS								
-----								
Program Management - Air And Radiation		42.6	44.3	44.3		44.3	44.3	
Program Management - Water		41.5	43.3	41.9		41.9	41.9	
Program Management - Enforcement And Compliance Monitoring		9.3	9.0	9.0		9.0	9.0	
Program Management - External Affairs		12.0	10.5	11.5		11.5	12.7	1.2

## PROGRAM MANAGEMENT

## Program Management

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
PERMANENT WORKYEARS							
Program Management - Pesticides and Toxic Substances	33.8	48.5	41.5		41.5	43.5	2.0
Program Management - General Counsel	8.0	8.2	8.2		8.2	8.2	
Program Management - Research & Development	49.8	41.2	40.7		40.7	41.2	.5
Program Management - Solid Waste and Emergency Response	22.2	28.8	28.8		28.8	30.0	1.2
TOTAL PERMANENT WORKYEARS	219.2	233.8	225.9		225.9	230.8	4.9
TOTAL WORKYEARS							
Program Management - Air And Radiation	46.0	46.8	46.8		46.8	46.8	
Program Management - Water	45.0	46.3	44.9		44.9	44.9	
Program Management - Enforcement And Compliance Monitoring	9.3	9.0	9.0		9.0	9.0	
Program Management - External Affairs	15.2	12.7	13.7		13.7	12.7	-1.0



PROGRAM MANAGEMENT

Program Management

ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
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(DOLLARS IN THOUSANDS)

TOTAL WORKYEARS

Program Management - Pesticides and Toxic Substances	41.2	54.3	47.3	47.3	44.3	-3.0
Program Management - General Counsel	9.9	10.5	10.5	10.5	10.5	
Program Management - Research & Development	55.3	57.7	57.2	57.2	57.2	
Program Management - Solid Waste and Emergency Response	27.7	32.0	32.0	32.0	32.0	
TOTAL WORKYEARS	249.6	269.3	261.4	261.4	257.4	-4.0

## MANAGEMENT AND SUPPORT

### Program Management

#### Budget Request

The Agency requests a total of \$14,858,800 supported by 257.4 total workyears for 1987, an increase of \$529,100 and a decrease of 4.0 total workyears. All of the request is for the Salaries and Expenses appropriation.

#### Program Description

The Program Management component provides resources generally for Assistant Administrators, Office Directors and their immediate staffs for eight of EPA's major offices: Air and Radiation; Water; Enforcement and Compliance Monitoring; External Affairs; Pesticides and Toxic Substances; General Counsel; Research and Development; and Solid Waste and Emergency Response. Resources provide for formulation of overall management and programmatic policy, and centralized planning and budgeting activities also include the coordination and integration of programs throughout the Agency as well as performing liaison activities with Congress, the Office of Management and Budget and other Federal Agencies and States.

#### PROGRAM MANAGEMENT - AIR AND RADIATION

##### 1987 Program Request

The Agency requests a total of \$2,904,200 supported by 46.8 total workyears, all of which will be for the Salaries and Expenses appropriation. The 1987 request represents an increase of \$124,900 total dollars and no change in total workyears from 1986. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. Major program emphases will continue to be implementation of the Clean Air Act Amendments of 1977, the Atomic Energy Act, the Uranium Mill Tailings Radiation Control Act, and development of major decisions related to these acts.

##### 1986 Program

In 1986, the Agency is allocating a total of \$2,779,300 supported by 46.8 total workyears, all of which is from the Salaries and Expenses appropriation. This program is providing management support for the Clean Air Act, the Atomic Energy Act, and the Uranium Mill Tailings Radiation Control Act. Key activities include: executive management direction, program planning and analysis, resource management, and budget development. Administrative support to Office of Air and Radiation (OAR) programs is also being provided.

##### 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,412,000 supported by 46.0 total workyears, all of which was from the Salaries and Expenses appropriation. The program provided executive management, strategic planning and analysis, and budget and administrative support to OAR programs.

## PROGRAM MANAGEMENT - WATER

### 1987 Program Request

The Agency requests a total of \$2,740,600 supported by 44.9 total workyears, all of which will be for the Salaries and Expenses appropriation. This request represents an increase of \$183,700 and no change in total workyears from 1986. The increase provides for additional support costs as well as program analysis and evaluation studies to improve overall management of the water quality and drinking water programs.

The 1987 request supports the development of national policy and implementation of the national regulatory programs for the Water Quality and Drinking Water media. Specific activities include: management of the Office of Water operating guidance and accountability system; development of program plans and budget for implementation of Agency policies; development of legislative initiatives and directions and review of regulations and program policies; support to Agency geographic initiatives for crossmedia regulatory control and environmental results management; tracking of budget execution; and administrative management.

### 1986 Program

In 1986, the Agency is allocating a total of \$2,556,900 supported by 44.9 total workyears, all of which is from the Salaries and Expenses appropriation. The program continues to focus in 1986 on the reauthorization of the Clean Water Act and the Safe Drinking Water Act and the accompanying process of strategy development to implement amendments. Activities such as long-range planning and policy analysis, budget development and execution and administrative management will remain ongoing activities.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,773,100 supported by 45.0 total workyears, all of which was from the Salaries and Expenses appropriation. These resources provided for executive management, policy and long range planning and analysis, and budget and administrative support for programs within the Office of Water. Work continued on the reauthorization of the Clean Water Act and Safe Drinking Water Act and implementation of applicable portions of the Resources Conservation and Recovery Act. In addition, the program accomplished the reauthorization of the Marine Protection Research and Sanctuaries Act in 1985.

## PROGRAM MANAGEMENT - ENFORCEMENT AND COMPLIANCE MONITORING

### 1987 Program Request

The Agency requests a total of \$416,700 supported by 9.0 workyears, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$18,500 and no change in total workyears from 1986. The dollar increase reflects adjustments to the base as part of government-wide deficit reductions.

This request will be used to provide basic administrative, financial, and management services to the Office of Enforcement and Compliance Monitoring. This includes program planning, personnel management, budgeting, financial management, management analysis and administrative services. These resources will also be used to continue to provide support and oversight of the management operations of the Denver National Enforcement Investigations Center. This level of funding will also provide budget formulation and workload analysis support for the legal enforcement functions of the ten Regional Counsels.

### 1986 Program

In 1986, the Agency is allocating a total of \$398,200 supported by 9.0 total workyears, all of which is from the Salaries and Expenses appropriations.

This program provides program direction and management support for the Office of Enforcement and Compliance Monitoring (OECM). In addition to supporting the Assistant Administrator, it includes the OECM Management Operations functions. The Management Operations staff is responsible for the internal program planning, budget formulation, financial management, and administrative operations for the entire Office of Enforcement and Compliance Monitoring as well as budget formulation support for the enforcement functions of the ten Regional Counsels. The budget formulation activities include leadership in coordination of projections for administrative and judicial enforcement activities in all statutory areas and media for which the Agency is responsible.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$428,500 supported by 9.3 total workyears, all of which was from the Salaries and Expenses appropriation.

In 1985, this program provided basic program planning, management, personnel, financial, and administrative support services to the Assistant Administrator. In addition, this level provided resources to coordinate formulation of consistent budget requests for enforcement and compliance monitoring activities across all media.

### PROGRAM MANAGEMENT - EXTERNAL AFFAIRS

#### 1987 Program Request

The Agency requests a total of \$676,200 supported by 12.7 total workyears, all of which will be for the Salaries and Expenses appropriation. This represents a decrease of \$5,000 and 1.0 total workyear from 1986. The workyear and dollar decreases reflect a reduction in resources devoted to special projects. In 1987, this office will require these resources to continue the full coordination of the staff offices in External Affairs; to provide the necessary oversight, management, strategies, planning, and support services to these staff offices; and to support the Administrator and Assistant Administrators in coordinating, representing and communicating the Agency's programs and policies to the Congress, the public, other government entities, and the media, as well as involving the Congress, public, government entities and the media for input into the Agency's policies.

### 1986 Program

In 1986, the Agency is allocating a total of \$681,200 supported by 13.7 total workyears, all of which is from the Salaries and Expenses appropriation. Major emphasis will be placed on strengthening our strategies and procedures for communicating better with outside groups by informing affected parties in a timely manner about EPA actions and the decisions and risks the Agency must face.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$803,600 supported by 15.2 total workyears, all of which was from the Salaries and Expenses appropriation. In 1985, the office initiated procedures and strategies to communicate more effectively with the public and outside groups. This program element provided the management resources, and administrative support necessary to support the Office of External Affairs and staff offices.

## PROGRAM MANAGEMENT - PESTICIDES AND TOXIC SUBSTANCES

### 1987 Program Request

The Agency requests a total of \$2,216,500 supported by 44.3 total workyears, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$4,700 and a decrease of 3.0 total workyears from 1986. The decrease in total workyears will be possible because of more effective use of resources. The dollar increase reflects adjustments to the 1986 base as part of government-wide deficit reductions.

These resources will support senior level management of the Pesticides and Toxic Substances programs as well as the Immediate Office of the Assistant Administrator for Pesticides and Toxic Substances. Key activities include: effective and efficient general management, strategic planning, and administrative and budget support.

### 1986 Program

In 1986, the Agency is allocating a total of \$2,211,800 supported by 47.3 total workyears, all of which is from the Salaries and Expenses appropriation. These resources provide senior level management of the Pesticides and Toxic Substances programs as well as the Immediate Office of the Administrator for Pesticides and Toxic Substances.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,998,900 supported by 41.2 total workyears, all of which was from the Salaries and Expenses appropriation.

## PROGRAM MANAGEMENT - GENERAL COUNSEL

### 1987 Program Request

The Agency requests a total of \$460,700 supported by 10.5 total workyears, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$22,200 and no change in total workyears from 1986. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions.

The request will provide for executive management and planning, budgeting, financial management, management analysis, and administrative support services to the Office of General Counsel.

### 1986 Program

In 1986, the Agency is allocating a total of \$438,500 supported by 10.5 total workyears, all of which is from the Salaries and Expenses appropriation.

The program provides for executive management, planning, budgeting, financial management, management analysis, and administrative support to the Office of General Counsel.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$368,400 supported by 9.9 total workyears, all of which was from the Salaries and Expenses appropriation.

Activities focused on providing executive management, planning, analytical support, budgeting, financial management, and administrative services to the Office of General Counsel.

#### PROGRAM MANAGEMENT - RESEARCH AND DEVELOPMENT

##### 1987 Program Request

The Agency requests a total of \$3,773,700 supported by 57.2 total workyears, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$92,500 and no change in total workyears from 1986. The dollar increase reflects adjustments to the 1986 base as part of government-wide deficit reductions.

In 1987, the Office of Research and Development's (ORD) program management activities will provide overall direction, scientific policy guidance and administrative support to a diversified research program which is conducted in Headquarters, in 14 major laboratories and various field sites across the country. These activities will ensure the coordination of research efforts and efficient utilization of resources to meet the Agency's research requirements. Specific activities include: the formulation and dissemination of scientific and managerial policy for ORD; the coordination of the research program planning and budgeting cycle, including the development of research strategies and program plans for a balanced and integrated program; the monitoring and analysis of current year resources, research operations and research products; a liaison function, which enables ORD to ascertain regional needs, incorporate these needs into its planning and support regional offices throughout the year as well as work with Congress, OMB and other Federal agencies; and the operation and maintenance of ORD's Information Systems which support research program planning and accountability to senior management. This program supports the smooth operation of ORD.

##### 1986 Program

In 1986, the Agency is allocating a total of \$3,681,200 supported by 57.2 total workyears, all of which is from the Salaries and Expenses appropriation. Program management will continue to coordinate and integrate the entire research and development effort of the Agency, ensuring that needs identified by program and Regional Offices are met.

##### 1985 Accomplishments

The Agency obligated a total of \$3,919,500 supported by 55.3 total workyears in 1985, all of which was from the Salaries and Expenses appropriation. These resources provided for the overall direction, policy guidance, management analyses, liaison activities, program planning and budgeting, ORD's information systems, and general administrative support.

#### PROGRAM MANAGEMENT - SOLID WASTE AND EMERGENCY RESPONSE

##### 1987 Program Request

The Agency requests a total of \$1,670,200 supported by 32.0 total workyears, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$87,600 and no change in total workyears from 1986. The dollar increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. These resources will allow the Agency to continue to staff and operate a complete management team within the Office of Solid Waste and Emergency Response (OSWER). They will provide for a wide array of policy development and analysis activities, institutional and public liaison functions, financial management, and other program support activities necessary to ensure the effective operation of a national program.

### 1986 Program

In 1986, the Agency is allocating a total of \$1,582,600 supported by 32.0 total workyears, all of which is from the Salaries and Expenses appropriation. This level of resources provides for a wide range of support to the Regions and to the Agency as a whole. Expected accomplishments include the review of policy recommendations and proposed regulations; integration of both program and enforcement hazardous waste and Superfund activities; and budget preparation and justification as well as financial management.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$4,199,100 supported by 27.7 total workyears, all which was from the Salaries and Expenses appropriation. An overall OSWER management plan was implemented, identifying specific measures of success milestones, and performance reviews. OSWER continued integrating hazardous waste and Superfund activities, managing the review of policy recommendations and proposed regulations, including proposed Superfund legislation, and maintaining effective financial management controls.

As the Superfund program was nearing the end of its first five year authorization, the Agency developed and implemented a contingency plan to conserve funds until the Superfund taxing authority is reauthorized. This action has enabled the Agency to continue the program in 1986.





# **Office of the Administrator**



# ENVIRONMENTAL PROTECTION AGENCY

## 1987 Budget Estimate

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# AGENCY MANAGEMENT

## Office of the Administrator/Executive Offices

ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
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(DOLLARS IN THOUSANDS)

### PROGRAM

#### Immediate Office of the Administrator

Salaries & Expenses	\$1,952.3	\$1,824.6	\$2,285.1	-\$98.4	\$2,186.7	\$2,269.4	\$82.7
TOTAL	\$1,952.3	\$1,824.6	\$2,285.1	-\$98.4	\$2,186.7	\$2,269.4	\$82.7

#### Office of Regional Operations

Salaries & Expenses	\$247.8	\$274.5	\$328.4	-\$14.1	\$314.3	\$329.9	\$15.6
TOTAL	\$247.8	\$274.5	\$328.4	-\$14.1	\$314.3	\$329.9	\$15.6

#### Office of Executive Support

Salaries & Expenses	\$800.6	\$829.8	\$796.2	-\$34.3	\$761.9	\$856.1	\$94.2
TOTAL	\$800.6	\$829.8	\$796.2	-\$34.3	\$761.9	\$856.1	\$94.2

#### Regulatory Info. Svc. Center

Salaries & Expenses	\$530.7	\$526.3	\$517.0	-\$22.2	\$494.8		-\$494.8
TOTAL	\$530.7	\$526.3	\$517.0	-\$22.2	\$494.8		-\$494.8

#### Administrator's Representation Fund

Salaries & Expenses	\$2.2	\$3.0	\$3.0	-\$0.1	\$2.9	\$3.2	\$0.3
TOTAL	\$2.2	\$3.0	\$3.0	-\$0.1	\$2.9	\$3.2	\$0.3

#### Office of International Activities

Salaries & Expenses	\$1,134.7	\$1,156.8	\$1,062.2	-\$45.6	\$1,016.6	\$1,127.9	\$111.3
TOTAL	\$1,134.7	\$1,156.8	\$1,062.2	-\$45.6	\$1,016.6	\$1,127.9	\$111.3

# AGENCY MANAGEMENT

## Office of the Administrator/Executive Offices

		ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----								
(DOLLARS IN THOUSANDS)								
Office of Civil Rights								
Salaries & Expenses		\$1,315.7	\$1,096.3	\$1,290.6	-\$55.7	\$1,234.9	\$1,276.2	\$41.3
	TOTAL	\$1,315.7	\$1,096.3	\$1,290.6	-\$55.7	\$1,234.9	\$1,276.2	\$41.3
Science Advisory Board								
Salaries & Expenses		\$1,228.8	\$1,246.5	\$1,242.4	-\$53.5	\$1,188.9	\$1,276.3	\$87.4
	TOTAL	\$1,228.8	\$1,246.5	\$1,242.4	-\$53.5	\$1,188.9	\$1,276.3	\$87.4
Office of								
Administrative Law								
Judges								
Salaries & Expenses		\$724.9	\$761.8	\$751.2	-\$32.3	\$718.9	\$813.0	\$94.1
	TOTAL	\$724.9	\$761.8	\$751.2	-\$32.3	\$718.9	\$813.0	\$94.1
Office of Small &								
Disadvantaged Business								
Utilization								
Salaries & Expenses		\$537.8	\$457.0	\$557.4	-\$23.9	\$533.5	\$516.6	-\$16.9
	TOTAL	\$537.8	\$457.0	\$557.4	-\$23.9	\$533.5	\$516.6	-\$16.9
TOTAL:								
Salaries & Expenses		\$8,475.5	\$8,176.6	\$8,833.5	-\$380.1	\$8,453.4	\$8,468.6	\$15.2
	TOTAL	\$8,475.5	\$8,176.6	\$8,833.5	-\$380.1	\$8,453.4	\$8,468.6	\$15.2
Office of Admini- strator/Executive Office								
PERMANENT WORKYEARS								
-----								
Immediate Office of The Administrator		34.7	30.3	40.3		40.3	40.3	
Office of Regional Operations		4.5	4.0	5.0		5.0	5.0	

# AGENCY MANAGEMENT

## Office of the Administrator/Executive Office

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
	(DOLLARS IN THOUSANDS)						
Office of Executive Support	21.3	19.2	19.2		19.2	19.2	
Regulatory Information Service Center	4.8	5.0					
Office of International Activities	17.6	19.0	19.0		19.0	19.0	
Office of Civil Rights	21.9	18.8	21.8		21.8	21.8	
Science Advisory Board	11.8	14.1	14.1		14.1	14.1	
Office of Administrative Law Judges	14.3	15.0	15.0		15.0	15.0	
Office of Small & Disadvantaged Business Utilization	8.0	5.1	6.1		6.1	6.1	
TOTAL PERMANENT WORKYEARS	138.9	130.5	140.5		140.5	140.5	
TOTAL WORKYEARS	-----						
Immediate Office of The Adminstrator	37.5	33.3	43.3		43.3	43.3	
Office of Regional Operations	4.5	4.0	5.0		5.0	5.0	

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# AGENCY MANAGEMENT

## Office of the Administrator/Executive Offices

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
	(DOLLARS IN THOUSANDS)						
Office of Executive Support	24.1	23.8	23.8		23.8	23.8	
Regulatory Information Service Center	5.5	5.0					
Office of International Activities	21.9	22.0	22.0		22.0	22.0	
Office of Civil Rights	23.7	20.8	23.8		23.8	23.8	
Science Advisory Board	19.9	23.9	23.9		23.9	23.9	
Office of Administrative Law Judges	14.3	15.6	15.6		15.6	15.6	
Office of Small & Disadvantaged Business Utilization	8.6	5.9	6.9		6.9	6.9	
TOTAL WORKYEARS	160.0	154.3	164.3		164.3	164.3	

## MANAGEMENT AND SUPPORT

### Agency Management

#### Office of the Administrator/Staff Offices

##### Budget Request

The Agency requests a total of \$8,468,600 supported by 164.3 total workyears for 1987, an increase of \$15,200 and no change in workyears from 1986. All of the request will be for the Salaries and Expenses appropriation.

##### Program Description

These resources support the Immediate Office of the Administrator and the staff offices which report directly to the Administrator. The Administrator and Deputy Administrator are responsible for providing policy guidance and direction to the Agency and ensuring implementation of their policies; the staff offices provide cross-cutting Agency guidance for scientific review of regulations and research, international environmental initiatives, as well as civil rights, administrative law hearings, regional communication, and support for small and disadvantaged businesses.

Immediate Office of the Administrator -- This office includes: the Administrator and Deputy Administrator, special assistants to the Administrator and Deputy Administrator for the various program areas, Judicial Officers, and clerical support staff.

Office of Regional Operations -- This office provides Headquarters with a stronger and more effective link to each of the ten Regional offices. This link ensures that the Administrator's policies are effectively communicated to the Regional Administrators, that the Regions are included in the policy-making process, that the Administrator is alerted to any potential Regional problems and concerns, and that significant Regional issues are coordinated with Headquarters program offices.

Office of Executive Support -- This office provides centralized budget planning and implementation, resource management and personnel, computer planning, and administrative support services to the Administrator and staff offices. The office also manages the Agency's correspondence and the Freedom of Information functions.

Regulatory Information Service Center -- The center is responsible for tabulating and compiling information provided by other Federal agencies concerning their regulatory efforts.

Administrator's Representation Fund -- The Fund is used for official receptions and meetings hosted primarily by the Administrator for domestic and foreign officials.

Office of International Activities -- This office provides guidance and management for the Agency's international activities and programs with Western European countries, Japan, and the Agency's Scientific Activities Overseas (SAO) Program. In addition, the Office manages agreements with Canada and Mexico on cross-boundary environmental issues and oversees Agency involvement in the activities of international organizations.

Office of Civil Rights -- This office manages the Agency's civil rights programs. It provides policy guidance to the Administrator and evaluates activities required to carry out the Agency's responsibilities to assure equal opportunity and to prohibit discrimination in employment at EPA.



Science Advisory Board -- The Board consists of a Director, professional and clerical staff, and independent scientists and engineers who advise the Administrator on the scientific and technical bases of the Agency's decisions. They review the scientific basis of regulatory proposals, the adequacy of Agency research and the research planning process, the five-year research and development plan, as well as special requests from the Administrator, the Deputy Administrator and the Congress.

Office of Administrative Law Judges -- Judges from this office preside over and conduct hearings required by the Administrative Procedures Act related to appeals of Agency regulations and decisions.

Office of Small and Disadvantaged Business Utilization -- This office provides Agencywide oversight in implementing programs under Sections 8 and 15 of the Small Business Act, as amended, and develops national policy for EPA for implementing the Agencywide minority and women's business enterprise program.

#### IMMEDIATE OFFICE OF THE ADMINISTRATOR

##### 1987 Program Request

The Agency requests a total of \$2,269,400 supported by 43.3 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$82,700 and no change in total workyears from 1986. The increase reflects greater emphasis on resolving administrative actions. The office is responsible for Agency policy and direction, leadership, management and setting environmental goals. In 1987, emphasis will be put on the Judicial Officer function to review and approve final decisions on Equal Employment Opportunity (EEO) cases that have been coordinated by the Office of Civil Rights (OCR) and to process the expanding number of environmental cases sent to the Administrator for final decision.

##### 1986 Program

In 1986, the Agency is allocating a total of \$2,186,700 supported by 43.3 total workyears for this program, all of which is from the Salaries and Expenses appropriation. The major priorities in the Immediate Office are increased emphasis on enforcement and compliance efforts of both environmental and civil rights regulations, continued delegations to State and local governments, and continued support of enhanced science as a basis for decision-making.

##### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,952,300 supported by 37.5 total workyears for this program, all of which was from the Salaries and Expenses appropriation. The major focus of activity in the Immediate Office was to pursue delegation of programs to State and local governments, support enhanced science as a basis for decision-making and managing risk, and ensure better internal management.

#### OFFICE OF REGIONAL OPERATIONS

##### 1987 Program Request

The Agency requests a total of \$329,900 supported by 5.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$15,600 and no change in total workyears from 1986. The increase reflects adjustments to the 1986 base as part of government-wide deficit

reductions. The office will continue to ensure that the Administrator's policies are effectively communicated to the Regional Administrators; that the Administrator is alerted to potential Regional problems and concerns; and that the Administrator is assisted in managing significant Regional issues. The office will also increase emphasis on addressing the basic management needs of the Environmental Services Divisions.

#### 1986 Program

In 1986, the Agency is allocating a total of \$314,300 supported by 5.0 total workyears, all of which is from the Salaries and Expenses appropriation. The office is continuing to provide a key communications link between the Administrator and the ten Regional offices, and to be involved in Regional budget issues. The office will also put emphasis on providing guidance and coordination for the ten Environmental Services Divisions.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$247,800 supported by 4.5 total workyears for this program, all of which was from the Salaries and Expenses appropriation. The Office ensured that the Administrator's policies were effectively communicated to the Regional Administrators, that the Regions were included in the policy-making and decision-making processes, and that the Administrator was kept informed of Regional concerns and issues. In addition, the Office carried out its new responsibility as the Headquarters focal point for the Agency's Environmental Services Divisions.

#### OFFICE OF EXECUTIVE SUPPORT

##### 1987 Program Request

The Agency requests a total of \$856,100 supported by 23.8 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$94,200 and no change in total workyears from 1986. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. This office will provide administrative, personnel, and budget support to the Administrator's staff offices and to manage the Agency's correspondence and its Freedom of Information program.

##### 1986 Program

In 1986, the Agency is allocating a total of \$761,900 supported by 23.8 total workyears for this program, all of which is from the Salaries and Expenses appropriation. The office is monitoring resource expenditures, developing the outyear budget for the staff offices, providing centralized personnel and administrative support services, and assisting staff offices with recruitment and staffing and property control. The office is continuing to prepare a yearly report to Congress on the cost to the Agency and to the public of administering the Freedom of Information Act, to provide policy and program oversight on the Freedom of Information program, and to manage and track executive and Congressional correspondence.

##### 1985 Accomplishments

In 1985, the Agency obligated a total of \$800,600 supported by 24.1 total workyears for this program, all of which was from the Salaries and Expenses appropriation. The office completed monthly financial and operating plan reports, developed

the out-year budget for the staff offices and workload analysis for Regional Management, and provided personnel advice and assistance and staffing plan development, administrative services, and resource and computer planning studies for the Administrator's staff offices. The office also logged, controlled, and tracked all Freedom of Information requests, Congressional correspondence, and correspondence addressed to the Administrator and the Deputy Administrator.

#### REGULATORY INFORMATION SERVICE CENTER

##### 1987 Program Request

No resources are requested for the Regulatory Information Service Center (RISC). This function will be funded by the General Services Administration (GSA) in 1987.

##### 1986 Program

The Regulatory Information Service Center is allocating a total of \$494,800, all of which is from the Salaries and Expenses appropriation. The Agency will reimburse GSA for the RISC function under an interagency agreement. The Center will produce the Unified Agenda of Federal Regulations for October 1985 and April 1986 and will continue its monthly analysis of Federal Register Statistics.

##### 1985 Accomplishments

In 1985, the Agency obligated a total of \$530,700 supported by 5.5 total work-years for this program, all of which was from the Salaries and Expenses appropriation. The Center coordinated the publication of the Unified Agenda of Federal Regulations for October 1984 and April 1985. The Center also utilized its automated data base of Federal government regulatory activity and conducted monthly analyses of Federal Register statistics.

#### ADMINISTRATOR'S REPRESENTATION FUND

##### 1987 Program Request

The Agency requests a total of \$3,200 for this program, all of which will be for the Salaries and Expenses appropriation. This reflects an increase of \$300 from the 1986 level. This fund will enable the Administrator to host official receptions, meetings, and affairs for visiting dignitaries and officials.

##### 1986 Program

In 1986, the Agency is allocating a total of \$2,900 to this program, all of which is from the Salaries and Expenses appropriation, to cover the expenses of official receptions and other functions.

##### 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,200 for this function all of which was from the Salaries and Expenses appropriation. This amount covered the expenses of official receptions and other functions.

## OFFICE OF INTERNATIONAL ACTIVITIES

### 1987 Program Request

The Agency requests a total of \$1,127,900 supported by 22.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This reflects an increase of \$111,300 and no change in total workyears from 1986. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. The office will continue to manage the Agency's international activities and programs with an active role in bilateral agreements and international organizations. Among the international organizations with which the office will play an active role are the Office for Economic and Cooperation Development, the United Nations Environment Program, and the Economic Commission for Europe. In addition, the office will serve as the Federal Agency Coordinator for the North Atlantic Treaty Organization (NATO) and the Committee on Challenges on Modern Societies (CCMS).

### 1986 Program

In 1986, the Agency is allocating a total of \$1,016,600 supported by 22.0 total workyears to this office, all of which is from the Salaries and Expenses appropriation. The office is continuing to provide guidance, coordination and exchange of scientific and technical information on a regular basis in support of Agency programs and to promote agreed upon approaches to common environmental problems with border countries, including development of an environmental agreement with Mexico to control border sanitation problems and re-negotiation of a Great Lakes Water Quality Agreement.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,134,700 supported by 21.9 total workyears for this program, all of which was from the Salaries and Expenses appropriation. Dealing with border pollution problems with Canada and Mexico dominated the focus of the office. This included negotiations on a transboundary air quality agreement, a joint plan to reduce phosphorous levels in the Great Lakes, cooperative efforts to remedy the pollution in the Niagara River Basin, and negotiations with Mexico concerning a new border agreement on control of border sanitation problems. New initiatives were also taken in support of bilateral cooperation with West Germany, Brazil, China, the Netherlands, USSR, and the Caribbean nations. Emphasis was also directed towards the harmonization of regulatory practices to meet environmental objectives and to facilitate trade and environmental aspects of trade in chemicals and shipment of hazardous wastes.

## OFFICE OF CIVIL RIGHTS

### 1987 Program Request

The Agency requests a total of \$1,276,200 supported by 23.8 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This reflects an increase of \$41,300 and no change in total workyears from 1986. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. In 1987, the Office of Civil Rights will continue to provide technical guidance and direction to the Agency's civil rights efforts; assume responsibility for policy and implementation of the discrimination complaints processing system; expand and improve the Equal Employment Opportunity (EEO) counseling program to resolve complaints through informal conciliation; and strengthen the Special Emphasis programs by conducting seminars and workshops for special emphasis employees and Agency managers.

### 1986 Program

The Agency is allocating a total of \$1,234,900 supported by 23.8 total work-years for this program, all of which is from the Salaries and Expenses appropriation. These resources are enabling the Office of Civil Rights to continue to provide technical guidance and direction for the Agency's Civil Rights efforts. Increased emphasis is being placed on reducing the average processing time for complaints of discrimination, expanding the special emphasis program management to include full-time Black Employment and Federal Women's program management; and strengthening the Agency's participation in the Historically Black Colleges and Universities program.

### 1985 Accomplishments

The Agency obligated a total of \$1,315,700 supported by 23.7 total workyears for this program, all of which was from the Salaries and Expenses appropriation. The Office of Civil Rights improved the external complaints system, provided training to Office of Civil Rights' staff and Agency managers, expanded Agency-wide recruitment efforts; provided technical guidance and direction for the Agency's civil rights efforts; and provided continuous monitoring of affirmative action plan implementation. This office also expanded and improved the EEO counseling program; strengthened and improved the special emphasis programs; strengthened the Agency's participation in the Historically Black Colleges and Universities Program; and improved the implementation of the Agency's policy on non-discrimination in Federally-assisted programs.

### SCIENCE ADVISORY BOARD

#### 1987 Program Request

The Agency requests a total of \$1,276,300 supported by 23.9 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This reflects an increase of \$87,400 and no change in total workyears from 1986. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. The Administrator will identify approximately 64 regulatory issues for the Science Advisory Board (SAB) to review in 1987. The increase in reviews will be performed primarily by the Radiation Effects Committee.

### 1986 Program

In 1986, the Agency is allocating a total of \$1,188,900 supported by 23.9 total workyears for this program, all of which is from the Salaries and Expenses appropriation. The Science Advisory Board is providing expert, independent advice to the Administrator and the Agency on 54 scientific and technical issues facing the Agency.

### 1985 Accomplishments

The Agency obligated a total of \$1,228,800 supported by 19.9 total workyears for this program, all of which was from the Salaries and Expenses appropriation. The SAB was involved in 54 reviews during 1985. Included among these reviews were issues relating to hazardous air pollutants, toxic substances, radioactive waste disposal standards, asbestos in drinking water, hazardous waste incineration at sea and on land, nitrogen dioxide health effects, and toxic air pollutants.

## OFFICE OF ADMINISTRATIVE LAW JUDGES

### 1987 Program Request

The Agency requests a total of \$813,000 supported by 15.6 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This reflects an increase of \$94,100 and no change in total workyears from 1986. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. In 1987, this office will continue to preside over and conduct hearings required by the Administrative Procedures Act related to suspension, cancellation, licensing and enforcement actions, including the assessment of civil penalties initiated by the Agency. Preliminary estimates indicate that there will be approximately 1100 cases on the docket, an increase of approximately 200 cases from 1986. The Administrative Law Judges will also continue to adjudicate civil rights cases investigated by the Office of Civil Rights.

### 1986 Program

In 1986, the Agency is allocating a total of \$718,900 supported by 15.6 total workyears, all of which is from the Salaries and Expenses appropriation. The office expects to receive 880 cases from EPA Regional offices in 1986. Of this total, 186 cases are expected to be under the Resource Conservation and Recovery Act (RCRA), 524 cases under the Toxic Substances Control Act (TSCA), and 131 cases under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). In addition, this office is handling a total of 39 cases originating at Headquarters, including suspensions; cancellations; FIFRA; and Clean Air Act cases.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$724,900 supported by 14.3 total workyears for this program, all of which was from the Salaries and Expenses appropriation. This office maintained a docket of 765 cases. Of these cases, 162 were under RCRA; 450 were under TSCA; and 114 cases were under FIFRA. In addition, the office adjudicated civil rights cases investigated by the Office of Civil Rights.

## OFFICE OF SMALL AND DISADVANTAGED BUSINESS UTILIZATION

### 1987 Program Request

The Agency requests a total of \$516,600 supported by 6.9 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents a decrease of \$16,900 and no change in total workyears from 1986. The decrease reflects adjustments to personnel, compensation and benefit costs based on current staffing patterns. The office will continue to provide technical assistance to both Headquarters and Regional program office personnel to ensure that small, minority and/or women's businesses are receiving a "fair share" of procurement dollars under EPA's Financial Assistance Program. In addition, the Ombudsman is expected to respond to 3,500 inquiries from small firms on regulatory matters.

### 1986 Program

The Agency is allocating a total of \$533,500 supported by 6.9 total workyears for this program, all of which is from the Salaries and Expenses appropriation. In 1986, emphasis is being put on handling additional "Hotline" calls, implementing a Small Business Ombudsman Strategy, creating business regulatory outreach demonstration projects, and promoting Minority Business Enterprise and Women's Business

Enterprise participation in the Agency's financial assistance programs to comply with Executive Order 12432. The office is also assisting in carrying out a White House conference on small business issues preceded by small business conferences in all 50 states.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$537,800 supported by 8.6 total work-years for this program, all of which was from the Salaries and Expenses appropriation. The office coordinated activities with EPA's procurement and financial assistance programs by providing training and technical assistance; provided assistance toward increasing the level of Minority Business Enterprise/Women's Business Enterprise (MBE/WBE) participation in EPA-assisted programs by creating source lists and a complete Central Resource Directory (CRD) for use by contract officers, program managers and grant recipients, and by developing and implementing indirect procurement policy guidance; and provided technical and managerial assistance to Headquarters and Regional staff assigned to socioeconomic program activities and counseling to minority and women's business in compliance with Executive Order 12432. The office also provided a "Hotline" for small businesses concerning EPA regulations.





# **Office of Inspector General**



# AGENCY MANAGEMENT

## Office of the Inspector General

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							

### PROGRAM

#### Office of Inspector General

Salaries & Expenses	\$14,331.4	\$14,929.3	\$14,794.2	-\$636.2	\$14,158.0	\$14,748.7	\$590.7
TOTAL	\$14,331.4	\$14,929.3	\$14,794.2	-\$636.2	\$14,158.0	\$14,748.7	\$590.7

#### TOTAL:

Salaries & Expenses	\$14,331.4	\$14,929.3	\$14,794.2	-\$636.2	\$14,158.0	\$14,748.7	\$590.7
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Office of Inspector General	TOTAL	\$14,331.4	\$14,929.3	\$14,794.2	-\$636.2	\$14,158.0	\$14,748.7	\$590.7
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### PERMANENT WORKYEARS

Office of Inspector General	218.7	221.7	221.7		221.7	218.4	-3.3
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TOTAL PERMANENT WORKYEARS	218.7	221.7	221.7		221.7	218.4	-3.3
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### TOTAL WORKYEARS

Office of Inspector General	224.5	225.7	225.7		225.7	222.4	-3.3
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TOTAL WORKYEARS	224.5	225.7	225.7		225.7	222.4	-3.3
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## MANAGEMENT AND SUPPORT

### Agency Management

#### Office of Inspector General

##### Budget Request

The Agency requests a total of \$14,748,700 supported by 222.4 total workyears for 1987, an increase of \$590,700 and a decrease of 3.3 in total workyears from 1986. All of this request will be for the Salaries and Expenses appropriation.

##### Program Description

This office is responsible for conducting, supervising, and coordinating audits and investigations relating to EPA programs and operations; promoting economy, efficiency, and effectiveness in the administration of EPA programs; preventing and detecting fraud and abuse in EPA programs and operations; keeping the Administrator and the Congress advised of problem areas and related corrective action; and reviewing EPA regulations and legislation.

#### OFFICE OF INSPECTOR GENERAL

##### 1987 Program Request

The Agency requests a total of \$14,748,700 supported by 222.4 total workyears, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$590,700 and a decrease of 3.3 in total workyears from 1986. The decrease in workyears reflects decreased need for internal audits and investigations of anti-trust activities and other construction related fraud due to a reduction in the size of the construction grants program. The increase will finance preaward, interim and final audits of grants and contracts requested by Agency management.

The resources requested will be used by the Office of Inspector General (OIG) to continue conducting internal and management audits to improve the economy, effectiveness, and efficiency of EPA programs and provide audit coverage to EPA programs and operations which have received little or no attention in the past. We plan to perform major internal audits in the Office of Research and Development, and the Office of Pesticides and Toxic Substances, and continue coverage of major segments of the air, water, and Resource Conservation and Recovery Act (RCRA) programs. We also plan to continue our program of external audits of grants and contracts which have historically provided \$14 in recovered costs for each audit dollar spent.

The OIG will continue its investigations of antitrust activities and other construction-related fraud and will aggressively pursue new initiatives to search for fraud in the minority business enterprise program and submission of fraudulent documentation involving foreign vehicles. It will continue its efforts in fraud prevention, publicizing its activities to EPA employees, identifying areas sensitive to fraud, and developing new fraud detection methods.

##### 1986 Program

In 1986, the Agency is allocating a total of \$14,158,000 supported by 225.7 total workyears, all of which is from the Salaries and Expenses appropriation. The Office of Inspector General is continuing its efforts in performing internal

and management audits needed to help improve the economy, efficiency, and effectiveness of overall program operations. Primary emphasis is on reviewing programs or areas in which sufficient audit resources have not been devoted in the past. For example, reviews are planned for Regional management of the section 105 air grant program, groundwater compliance with RCRA, and the Office of Mobile Sources enforcement activities. Such reviews protect the environment by ensuring effective program operations and they improve the economy and efficiency of their operating methods.

OIG investigative resources are devoted to conducting criminal investigations relating to EPA programs and operations involving bid rigging and other fraud in EPA-funded construction activities; procurement fraud and false claims; fraud and misconduct involving EPA employees; unlawful disclosure of confidential business information; and administrative investigations of improprieties involving EPA programs and personnel. New initiatives have been aggressively undertaken to identify fraud in the minority business enterprise program and examine submission of fraudulent documentation involving importation of foreign vehicles. Continued efforts are being made to encourage the use of the OIG hotline to uncover instances of suspected fraud, waste, and mismanagement. Under the fraud prevention program, the OIG is providing technical and audit assistance to elements of the Agency assessing the adequacy of internal controls as required by the Federal Managers' Financial Integrity Act of 1982.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$14,331,400 supported by 224.5 total workyears, all of which was from the Salaries and Expenses appropriation. The Office of Inspector General issued 1,596 audit reports which questioned costs of \$162,500,000. On an overall basis, \$62,900,000 of costs questioned were sustained by Agency management. During the year, the Agency obtained \$2,800,000 of cost efficiencies and \$27,100,000 of actual cash recoveries as a result of audit efforts. An expanded internal and management audit program was implemented and about 35 percent of the OIG audit resources were devoted to examining many critical areas which had never been tested in EPA before. Internal audits provided recommendations for improving the effectiveness, efficiency, and results of program operations such as:

1. Required the use of recommended sampling methods for identifying asbestos-in-schools since methods being followed provided limited assurance that asbestos would be found.
2. Strengthened EPA grant administration procedures to ensure that grant awards are made only to States that maintain a required level-of-effort and meet agreed upon commitments.
3. Provided effective management for \$7,000,000 of personal property and improving controls to prevent unreasonable or improper payments to contractors.
4. Resolved disputes in a timely manner and charged interest on disputed receivables. The OIG estimates that \$1,000,000 may be saved annually.

The OIG opened 445 new investigations and closed 447 investigations, obtaining 32 indictments and convictions. Significant results were achieved in investigations of construction-related fraud, the minority business enterprise program, and the submission of fraudulent documentation involving foreign vehicles.



# **Office of General Counsel**





# AGENCY MANAGEMENT

## Office of General Counsel

		ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----								
(DOLLARS IN THOUSANDS)								
-----								
PROGRAM								
-----								
Office of General Counsel								
Salaries & Expenses		\$6,618.3	\$6,632.0	\$6,479.0	-\$278.7	\$6,200.3	\$6,414.9	\$214.6
TOTAL		\$6,618.3	\$6,632.0	\$6,479.0	-\$278.7	\$6,200.3	\$6,414.9	\$214.6
TOTAL:								
Salaries & Expenses		\$6,618.3	\$6,632.0	\$6,479.0	-\$278.7	\$6,200.3	\$6,414.9	\$214.6
Office of General Counsel	TOTAL	\$6,618.3	\$6,632.0	\$6,479.0	-\$278.7	\$6,200.3	\$6,414.9	\$214.6
-----								
PERMANENT WORKYEARS								
-----								
Office of General Counsel		112.4	121.0	119.3		119.3	119.3	
TOTAL PERMANENT WORKYEARS		112.4	121.0	119.3		119.3	119.3	
-----								
TOTAL WORKYEARS								
-----								
Office of General Counsel		124.3	131.5	129.8		129.8	126.5	-3.3
TOTAL WORKYEARS		124.3	131.5	129.8		129.8	126.5	-3.3

## MANAGEMENT AND SUPPORT

### Agency Management

#### Office of General Counsel

##### Budget Request

The Agency requests a total of \$6,414,900 supported by 126.5 total workyears for 1987, an increase of \$214,600 and a decrease of 3.3 total workyears from 1986. All of the request will be for the Salaries and Expenses appropriation.

##### Program Description

The Office of General Counsel provides legal advice and counsel to the Agency's top management and media program offices concerning legal interpretation of EPA administered statutes, other applicable laws, and such matters as personnel, grants, and contracts. In addition, the program is responsible for litigation activity in which EPA is a defendant. These resources provide legal advice to the Agency in all major regulatory actions, or other Agency actions in which litigation is likely, to ensure that legal error is avoided and legal positions are presented in the most persuasive manner.

#### GENERAL COUNSEL

##### 1987 Program Request

The Agency requests a total of \$6,414,900 supported by 126.5 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$214,600 and a decrease of 3.3 total workyears from 1986. The decrease in workyears reflects a streamlining of program operations. The increase will provide for increased operating costs.

Priority functions in 1987 will include handling all litigation in which EPA is a defendant. It will also include support to: accelerated Resource Conservation and Recovery Act (RCRA) rulemaking; RCRA State authorizations; National Pollutant Discharge Elimination System and Safe Drinking Water Act permit reviews; Federal Insecticide, Fungicide, and Rodenticide Act adjudicatory proceedings; Rebuttable Presumptions Against Registration (special review) and registration standard conclusions; Clean Air Act National Ambient Air Quality Standards revisions; National Emission Standards for Hazardous Air Pollutants; State Implementation Plan reviews; support to assistance programs; bid protests; debarment and suspension oversight; Freedom of Information Act responses; Inspector General; personnel; ethics matters; and consultation and advice regarding such matters as interpretation and implementation of regulations, statutes, and administrative procedures.

##### 1986 Program

In 1986, the Agency is allocating a total of \$6,200,300 supported by 129.8 total workyears for this program, all of which is from the Salaries and Expenses appropriation. The 1986 program provides continued support to Agency program priorities through legal advice and assistance, handling defensive litigation, review of Agency rulemaking actions, and participating in selected administrative proceedings.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$6,618,300 supported by 124.3 total workyears, all of which was from the Salaries and Expenses appropriation. In 1985, the General Counsel supported Agency priorities by providing legal advice and support to Agency managers and by defending the Agency in litigation filed against it. The Office of General Counsel also reviewed regulatory actions to ensure legal defensibility and provided advice on other actions, such as grants, contracts, and personnel matters.



# **Office of External Affairs**



# AGENCY MANAGEMENT

## Office of External Affairs

		ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
		(DOLLARS IN THOUSANDS)						
PROGRAM		-----						
Office of Legislative Analysis								
Salaries & Expenses		\$817.9	\$941.7	\$939.9	-\$40.5	\$899.4	\$945.1	\$45.7
TOTAL		\$817.9	\$941.7	\$939.9	-\$40.5	\$899.4	\$945.1	\$45.7
Office of Congressional Liaison								
Salaries & Expenses		\$772.6	\$937.2	\$865.3	-\$37.2	\$828.1	\$867.3	\$39.2
TOTAL		\$772.6	\$937.2	\$865.3	-\$37.2	\$828.1	\$867.3	\$39.2
Office of Public Affairs								
Salaries & Expenses		\$2,431.1	\$2,552.0	\$2,489.8	-\$107.1	\$2,382.7	\$2,521.7	\$139.0
TOTAL		\$2,431.1	\$2,552.0	\$2,489.8	-\$107.1	\$2,382.7	\$2,521.7	\$139.0
Office of Private and Public Sector Liaison								
Salaries & Expenses		\$668.5	\$578.4	\$638.5	-\$27.5	\$611.0	\$635.2	\$24.2
TOTAL		\$668.5	\$578.4	\$638.5	-\$27.5	\$611.0	\$635.2	\$24.2
Office of Federal Activities								
Salaries & Expenses		\$1,936.2	\$1,637.8	\$1,627.4	-\$70.2	\$1,557.2	\$1,675.3	\$118.1
TOTAL		\$1,936.2	\$1,637.8	\$1,627.4	-\$70.2	\$1,557.2	\$1,675.3	\$118.1
TOTAL:								
Salaries & Expenses		\$6,626.3	\$6,647.1	\$6,560.9	-\$282.5	\$6,278.4	\$6,644.6	\$366.2
Office of External Affairs	TOTAL	\$6,626.3	\$6,647.1	\$6,650.9	-\$282.5	\$6,278.4	\$6,644.6	\$366.2

AGENCY MANAGEMENT

Office of External Affairs

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
PERMANENT WORKYEARS							
-----							
Office of Legislative Analysis	15.6	13.9	13.9		13.9	13.9	
Office of Congressional Liaison	16.5	19.5	19.5		19.5	19.5	
Office of Public Affairs	43.2	43.6	41.6		41.6	41.6	
Office of Private and Public Sector Liaison	11.0	9.7	11.7		11.7	11.4	-0.3
Office of Federal Activities	30.1	24.8	24.8		24.8	24.8	
TOTAL PERMANENT WORKYEARS	116.4	111.5	111.5		111.5	111.2	-0.3
TOTAL WORKYEARS							
-----							
Office of Legislative Analysis	18.9	20.9	20.9		20.9	20.9	
Office of Congressional Liaison	18.4	21.5	21.5		21.5	21.5	
Office of Public Affairs	47.6	48.6	46.6		46.6	46.6	



AGENCY MANAGEMENT

Office of External Affairs

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
Office of Private and Public Sector Liaison	12.8	9.7	11.7		11.7	11.4	-0.3
Office of Federal Activities	33.6	29.8	29.8		29.8	29.8	
TOTAL WORKYEARS	131.3	130.5	130.5		130.5	130.2	-0.3

## MANAGEMENT AND SUPPORT

### Agency Management

#### Office of External Affairs

##### Budget Request

The Agency requests a total of \$6,644,600 supported by 130.2 total workyears for 1987, an increase of \$366,200 and a decrease of 0.3 total workyears from 1986. All of the request will be for the Salaries and Expenses appropriation.

##### Program Description

These resources include the salaries and associated costs for the Immediate Office of the Assistant Administrator, the Office of Congressional Liaison, the Office of Legislative Analysis, the Office of Public Affairs (OPA), the Office of Private and Public Sector Liaison, and the Office of Federal Activities (OFA). The Office of External Affairs provides a clear interpretation of the Agency's program and priorities to increase Agency effectiveness by improving Congressional liaison, by establishing outreach to broaden our public involvement through State and local contacts, public interest groups, and citizen participation, and by reaffirming and strengthening Federal agency contacts.

Office of Legislative Analysis -- This office is responsible for preparing Agency draft legislation, developing testimony for Agency officials to present before Congress, and conducting analyses of environmentally related legislation developed by the Congress. It works closely with the Administrator, the Assistant Administrator for External Affairs, and the program and Regional offices in developing the Agency's legislative program and in guiding specific legislative proposals through the inter-agency legislative review process. This office also maintains the Agency's Legislative Reference Library and provides legislative research services for the Agency.

Office of Congressional Liaison -- This office serves as the principal point of Congressional contact for the Agency. It provides daily summaries of Congressional activities throughout EPA and provides recommendations, advice, and assistance to the Administrator, the Assistant Administrator for External Affairs, and other senior policy officials involved in the development, presentation, and implementation of the Agency's legislative program. The office reviews all Congressional correspondence, responds to Congressional requests for information and Agency publications, and coordinates grant and contract announcements to Congress.

Office of Public Affairs -- This office develops Agency policy for media relations and public information. Activities include: preparing press releases and feature materials for media distribution; responding to press inquiries; conducting press conferences and briefings; coordinating media appearances of key Agency officials; compiling daily and weekly news clips of national press coverage. The office also prepares publications for the general public on major programs and EPA activities; produces newsletters for internal EPA use; supervises the nationwide EPA community relations program to involve citizens in EPA decisions and actions; supports television and radio outlets nationwide with audiovisual materials explaining EPA programs; and reviews all public information materials for conformance to the Agency's Graphics Standards System.

Office of Private and Public Sector Liaison -- This office serves as the Agency's principal point of contact with major national public interest groups, environmental groups, industry representatives, and State and local governments, and advises the Administrator and other Agency officials on the positions and views of these groups and develops appropriate strategies for effective interactions and dialogue with them and their constituencies. The office will continue

to emphasize the Administrator's concern for developing cooperation and support for delegating Agency programs to State and local government and for broadening the base of involvement in the Agency's regulatory decision making process.

Office of Federal Activities -- This office develops national policies for dealing with environmental issues and problems associated with Federal agencies. Specifically, OFA: 1) ensures that EPA prepares Environmental Impact Statements (EISs) or Findings of No Significant Impact for those Agency programs specifically covered by the National Environmental Policy Act (NEPA), and assists Agency programs with reviews that are the functional equivalent for those programs that are not specifically covered by NEPA; 2) oversees Federal facility compliance with all EPA pollution control requirements, pursuant to Executive Order 12088; 3) ensures that Federal agencies carry out their activities in an environmentally sound manner pursuant to the National Environmental Policy Act and Section 309 of the Clean Air Act; 4) develops policies for dealing with environmental problems on Indian reservations and implements such policies; and 5) in concert with the Army Corps of Engineers, manages the Dredge and Fill program under Section 404 of the Clean Water Act. Finally, in support of the Council on Environmental Quality, OFA files and publishes notices of all Federal Environmental Impact Statements.

#### OFFICE OF LEGISLATIVE ANALYSIS

##### 1987 Program Request

The Agency requests a total of \$945,100 supported by 20.9 total workyears for this office, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$45,700 and no change in total workyears from 1986. This increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. During 1987, the office will continue to ensure that testimony, draft legislation, and analyses and reports on pending and proposed legislation will be developed and provided to the Office of Management and Budget (OMB) and the Congress in a timely fashion and consistent with Agency and Administration policies.

##### 1986 Program

In 1986, the Agency is allocating a total of \$899,400 supported by 20.9 total workyears for this office, all of which is from the Salaries and Expenses appropriation. The Office of Legislative Analysis provides leadership and support for special Agency working groups to draft legislative initiatives, develops testimony and provides required reports on legislation to Congress and OMB. In addition to providing technical support to the Agency programs and Regional offices on the major environmental legislation developing in Congress, special attention is devoted to reauthorization of the Comprehensive Environmental Response, Compensation and Liability Act, Clean Air Act, Clean Water Act, Toxic Substances Control Act, and Safe Drinking Water Act. The office is also responsible for representing the Agency in all legislation-related day-to-day contacts with the Office of Management and Budget and other Federal agencies.

##### 1985 Accomplishments

In 1985, the Agency obligated a total of \$817,900 supported by 18.9 total workyears for this office, all of which was from the Salaries and Expenses appropriation. The Office developed draft legislative proposals extending the appropriations required for all of EPA's major statutory authorities: Clean Water Act, Clean Air Act, Safe Drinking Water Act, Resource Conservation and Recovery Act, Marine Protection, Research, and Sanctuaries Act, Toxic Substances Control Act, and Federal Insecticide, Fungicide and Rodenticide Act. The Office began preparation of the

1986 legislative program and selected areas in which legislative proposals would be developed in the 99th Congress. The Office developed testimony and related material for 69 hearings, reviewed and responded to 176 bills referred to the Agency from OMB and Congressional Committees, 64 draft legislative reports proposed by other agencies, and 86 statements or testimony of other agencies. The Office also provided recommendations to the President on 17 enrolled bills.

#### OFFICE OF CONGRESSIONAL LIAISON

##### 1987 Program Request

The Agency requests a total of \$867,300 supported by 21.5 total workyears for this office, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$39,200 and no change in total workyears from 1986. The increase reflects adjustments to the 1986 base as part of government-wide reductions. The continuing use of computerized data bases for routine information functions within Congressional Liaison will enable the staff to deal more rapidly with some types of Congressional requests in 1987. The budget request will enable the office to provide effective day-to-day liaison with the Congress and will ensure that Member and Committee requests are handled in a timely manner.

##### 1986 Program

In 1986, the Agency is allocating a total of \$828,100 supported by 21.5 total workyears for this office, all of which is from the Salaries and Expenses appropriation. The Office of Congressional Liaison represents the views of the Agency before Congress and is responsible for the coordination of EPA-related hearings, the briefing of affected Congressional delegations, and the supervision of Congressionally generated casework and all daily interaction with Congressional Members and staff. Special attention in the 99th Congress is being placed on Congressional actions involving such major pieces of legislation as the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Clean Water Act, and Safe Drinking Water Act. Action on the Toxic Substances Control Act (TSCA), Clean Air Act, and FIFRA also continue to be significant.

##### 1985 Accomplishments

In 1985, the Agency obligated a total of \$772,600 supported by 18.4 total workyears for this office, all of which was from the Salaries and Expenses appropriation. The Office of Congressional Liaison was responsible for all day-to-day Congressional contacts, including more than 200 briefings of members and/or staff, involvement in approximately 80 hearings, and coordination of more than 70 specific Committee investigative information requests.

#### OFFICE OF PUBLIC AFFAIRS

##### 1987 Program Request

The Agency requests a total of \$2,521,700 supported by 46.6 total workyears for this office, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$139,000 and no change in total workyears from 1986. The increase results from increased operating expenses. In 1987, the Office of Public Affairs (OPA) will continue to inform, educate, and involve the public on the issues before the Agency and to promote understanding of the Agency's mission and the Administrator's goals and objectives.

### 1986 Program

In 1986, the Agency is allocating a total of \$2,382,700 supported by 46.6 total workyears for this office, all of which is from the Salaries and Expenses appropriation. In addition to working with the news media and providing informational materials for the general public, OPA is emphasizing: (1) providing leadership and guidance to strengthen EPA community relations activities; (2) improving coordination within the Agency of communication activities related to major Agency actions; and (3) strengthening long-range planning of public information activities in coordination with major EPA program offices and the Regional offices.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,431,100 supported by 47.6 total workyears for this office, all of which was from the Salaries and Expenses appropriation. In addition to the general activities of informing the news media and providing information material to the public, the office improved the cost-effectiveness of the information program by focusing on Agency priority issues of broad concern to the public, strengthened its system for keeping appropriate Agency personnel informed of community relations activities, and provided communications support for major EPA initiatives, including ground-water protection and a national air toxics strategy.

### OFFICE OF PRIVATE AND PUBLIC SECTOR LIAISON

#### 1987 Program Request

The Agency requests a total of \$635,200 supported by 11.4 total workyears for this office, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$24,200 and a decrease of 0.3 total workyears from 1986. The increase reflects adjustments to the 1986 base as part of government-wide reductions. The decrease results from a planned reduction in administrative personnel. In 1987, the office expects to enhance its program of communication and liaison with State and local elected officials, major intergovernmental constituency organizations (ICOs), private sector organizations and associations, environmental interest groups and the youth constituency. The office will also continue to assist in delegation of environmental programs to State and local governments and will assist all groups with information requests, arranging and attending meetings, and encouraging involvement in the regulatory process.

### 1986 Program

In 1986, the Agency is allocating a total of \$611,000 supported by 11.7 total workyears for this office, all of which is from the Salaries and Expenses appropriation. The office is improving communication with elected State and local officials through regular contact with ICOs and environmental and industry organizations and interest groups; representing the Agency at meetings conducted by ICO environmental committees; developing an Agency policy on the review of ICO contract and grant requests to ensure relevant and cost effective work products; participating in Agency-wide work groups on EPA policy management issues; communicating regularly with elected State and local officials; and providing advice on State and local concerns to senior Agency officials.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$668,500 supported by 12.8 total workyears for this office, all of which was from the Salaries and Expenses appropriation. During 1985, the office established and improved basic working relationships with intergovernmental constituency organizations, attended and/or addressed numerous meetings of ICO environmental committees, began a series of informal meetings with various business groups, initiated quarterly meetings of the EPA/State Committee and maintained daily dialogue with elected State and local officials.

## OFFICE OF FEDERAL ACTIVITIES

### 1987 Program Request

The Agency requests a total of \$1,675,300 supported by 29.8 total workyears for this office, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$118,100 and no change in total workyears from 1986. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. The Office of Federal Activities (OFA) will maintain oversight concerning EPA's compliance with the National Environmental Policy Act (NEPA), including preparation of the necessary environmental documents for NEPA compliance, such as environmental impact statements (EISs); direct activities to assure compliance by other Federal agencies with all environmental statutes pursuant to Executive Order 12088 and review the budget plans of other agencies to assure adequate funding of abatement projects pursuant to Office of Management and Budget Circular A-106; review other Federal agencies' projects and actions, including their EISs in accordance with section 309 of the Clean Air Act and NEPA; coordinate the implementation of EPA programs on Indian reservations, and manage the Dredge and Fill Program.

### 1986 Program

In 1986, the Agency is allocating a total of \$1,557,200 supported by 29.8 total workyears for this office, all of which is from the Salaries and Expenses appropriation. The office continues to direct activities pursuant to Executive Order 12088 and Office of Management and Budget Circular A-106 related to compliance of Federal installations with environmental regulations; review other Federal actions for potential environmental impact, develop guidance, and direct implementation of EPA policies associated with other Federal agencies, and increase liaison activities with these agencies; oversee the implementation of EPA's Indian Policy; and manage the EPA Dredge and Fill Program.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,936,200 supported by 33.6 total workyears for this office, all of which was from the Salaries and Expenses appropriation. The Office focused its activity on improving allocation and control of funding for the preparation of NEPA documents (Environmental Impact Statements and Findings of No Significant Impacts) implementing new procedures for both review of Federal agency actions and interaction with other agencies as required by NEPA and section 309 of the Clean Air Act; increasing emphasis on compliance of Federal Agencies with Federal statutory environmental requirements; developing and initially implementing an Agency policy on Indian tribes and reservation lands; and strengthening management of the Dredge and Fill Program.

# **Office of Policy, Planning and Evaluation**





# AGENCY MANAGEMENT

## Office of Policy, Planning and Evaluation

		ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----								
(DOLLARS IN THOUSANDS)								
PROGRAM								
-----								
Program Management - Policy, Planning And Evaluation								
Salaries & Expenses		\$761.2	\$832.4	\$872.3	-\$37.6	\$834.7	\$826.0	-\$8.7
TOTAL		\$761.2	\$832.4	\$872.3	-\$37.6	\$834.7	\$826.0	-\$8.7
Integrated Environmental Management Program								
Salaries & Expenses		\$3,412.3	\$3,215.5	\$3,269.4	-\$140.6	\$3,128.8	\$3,553.6	\$424.8
TOTAL		\$3,412.3	\$3,215.5	\$3,269.4	-\$140.6	\$3,128.8	\$3,553.6	\$424.8
Office of Policy Analysis								
Salaries & Expenses		\$9,600.3	\$9,304.7	\$9,201.6	-\$395.7	\$8,805.9	\$9,359.8	\$553.9
TOTAL		\$9,600.3	\$9,304.7	\$9,201.6	-\$395.7	\$8,805.9	\$9,359.8	\$553.9
Office of Standards & Regulations								
Salaries & Expenses		\$5,000.5	\$4,808.8	\$4,777.2	-\$205.5	\$4,571.7	\$4,870.7	\$299.0
TOTAL		\$5,000.5	\$4,808.8	\$4,777.2	-\$205.5	\$4,571.7	\$4,870.7	\$299.0
Office of Management Systems & Evaluation								
Salaries & Expenses		\$2,882.9	\$2,872.4	\$2,864.5	-\$123.2	\$2,741.3	\$2,611.2	-\$130.1
TOTAL		\$2,882.9	\$2,872.4	\$2,864.5	-\$123.2	\$2,741.3	\$2,611.2	-\$130.1
TOTAL:								
Salaries & Expenses		\$21,657.2	\$21,033.8	\$20,985.0	-\$902.6	\$20,082.4	\$21,221.3	\$1,138.9
Office of Policy, Planning and Evaluation	TOTAL	\$21,657.2	\$21,033.8	\$20,985.0	-\$902.6	\$20,082.4	\$21,221.3	\$1,138.9

# AGENCY MANAGEMENT

## Office of Policy, Planning and Evaluation

ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
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(DOLLARS IN THOUSANDS)

### PERMANENT WORKYEARS

Program Management - Policy, Planning And Evaluation	12.2	13.0	13.9	13.9	13.9	
Integrated Environmental Management Program	15.4	18.0	20.0	20.0	18.0	-2.0
Office of Policy Analysis	41.0	42.0	52.0	52.0	52.0	
Office of Standards & Regulations	48.2	48.0	58.0	58.0	58.0	
Office of Management Systems & Evaluation	43.2	49.0	49.0	49.0	48.0	-1.0
TOTAL PERMANENT WORKYEARS	160.0	170.0	192.9	192.9	189.9	-3.0

# AGENCY MANAGEMENT

## Office of Policy, Planning and Evaluation

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
-----							
TOTAL WORKYEARS							
-----							
Program Management - Policy, Planning And Evaluation	14.5	14.0	14.9		14.9	14.9	
Integrated Environmental Management Program	18.5	20.0	22.0		22.0	22.0	
Office of Policy Analysis	61.5	63.1	63.1		63.1	62.9	-0.2
Office of Standards & Regulations	70.5	68.8	68.8		68.8	67.8	-1.0
Office of Management Systems & Evaluation	53.9	59.0	59.0		59.0	55.0	-4.0
TOTAL WORKYEARS	218.9	224.9	227.8		227.8	222.6	-5.2

## MANAGEMENT AND SUPPORT

### Agency Management

#### Office of Policy, Planning and Evaluation

##### Budget Request

The Agency requests a total of \$21,221,300 supported by 222.6 total workyears for 1987, an increase of \$1,138,900 and a decrease of 5.2 total workyears from 1986. All of the request will be for the Salaries and Expenses appropriation.

##### Program Description

The Office of Policy, Planning and Evaluation (OPPE), under the guidance of the Assistant Administrator, directs the Agency's regulation development and review process, formulates Agency policy, and develops planning strategy.

Specifically, OPPE reviews all EPA regulations to ensure consistency with Agency policy, coordinates all internal Agency reviews of regulations, and leads the Agency's regulatory reform activities. OPPE plays an integral role in policy formulation through its analyses of the economic and environmental effects of EPA's regulations, policies, and programs, as well as evaluations of the effectiveness of ongoing Agency programs. Besides developing a framework for a well-run strategic planning process, OPPE ensures that EPA's program objectives and environmental goals are clearly defined and met.

In addition, OPPE provides special studies and analyses to aid Agency decision-making processes as well as support for the Agency's air toxics initiatives. Proposals for innovative approaches to integrated environmental management also emanate from OPPE. A brief description of each of the program elements included in OPPE follows:

Program Management - Policy, Planning and Evaluation -- This program element supports the Assistant Administrator's Immediate Office and provides senior OPPE managers with policy direction, program planning, and budgeting and resource management.

Integrated Environmental Management Program -- This program develops an integrated planning and program management strategy to make regulations more consistent and to avoid unnecessary economic or environmental impacts.

Office of Policy Analysis -- This program element contains resources to analyze EPA regulations, policies, and programs from the perspective of their economic and environmental impacts and benefits.

Office of Standards and Regulations -- This office manages the Agency's regulation development and review process, analyzes all of EPA's regulations to ensure technical quality and consistency with Agency policy, designs the Agency's regulatory reform activities, and develops innovative approaches to regulation.

Office of Management Systems and Evaluation -- This program operates the Agency's accountability system, evaluates program effectiveness in meeting Agency goals, and designs and implements necessary management reforms, including a system to manage for environmental results.

## PROGRAM MANAGEMENT - POLICY, PLANNING AND EVALUATION

### 1987 Program Request

The Agency requests a total of \$826,000 supported by 14.9 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents a decrease of \$8,700 and no change in total workyears from 1986. The decrease results from adjusting personnel compensation and benefits to meet anticipated requirements based on current staffing patterns.

This request will provide the Assistant Administrator with sufficient staff and resources for the policy direction, special analyses, and budgetary and administrative support necessary to manage OPPE and its component offices efficiently and effectively. Among these activities will be review of EPA statutory authority with a focus on statutory provisions or gaps which fail to allow appropriate consideration of health and environmental effects and program costs when making regulatory decisions, and response to General Accounting Office evaluations of EPA programs.

### 1986 Program

In 1986, the Agency is allocating a total of \$834,700 supported by 14.9 total workyears for this program, all of which is from the Salaries and Expenses appropriation. This program is providing overall policy direction and conducting the activities necessary to manage the component offices of OPPE.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$761,200 supported by 14.5 total workyears for this program, all of which was from the Salaries and Expenses appropriation. These funds supported the basic budgetary, administrative, analytic, and planning activities necessary to manage OPPE.

## INTEGRATED ENVIRONMENTAL MANAGEMENT PROGRAM

### 1987 Program Request

The Agency requests a total of \$3,553,600 supported by 22.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$424,800 and no change in total workyears from 1986. The increase reflects part of the Integrated Environmental Management Program's (IEMP) extramural support for the Agency's air toxics initiatives.

These initiatives will include work on a fourth geographic site, focusing on multi-media pollution analysis and control based on IEMP pilot projects at other sites, as well as evaluation of the necessity of addressing air toxics problems on a national level and developing means of tailoring programs to Regional, State, or local problems. IEMP also will work toward completing the Baltimore, Maryland and Santa Clara, California geographic projects; and the five State Pilot Projects for Improved Environmental Decision-Making in Oregon, Kansas, Kentucky, New Jersey, and Maryland. In addition, IEMP will complete development of a user friendly computer program for identifying cost-effective controls in a specific geographic area and work on the pesticides and ocean-dumping models and the pulp and paper and foundry analyses.

### 1986 Program

In 1986, the Agency is allocating a total of \$3,128,800 supported by 22.0 total workyears for this program, all of which is from the Salaries and Expenses appropriation. These resources are allowing IEMP to continue analyses of the priorities

identified in the screening phase for its Baltimore and Santa Clara projects. As part of the Air Toxics Strategy, IEMP is undertaking a national screening program to identify priority geographic sites for multi-media analysis as well as a new site-specific program for multi-media pollution analysis and control. The five State Pilot Projects for Improved Environmental Decision-Making are proceeding. In addition, IEMP is developing its user friendly computer model and continuing to build models applicable to inter-media issues (pesticides application, ground-water, ocean dumping) and to industry sub-sectors (pulp and paper, foundries, and organic chemicals).

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$3,412,300 supported by 18.5 total workyears for this program, all of which was from the Salaries and Expenses appropriation. With these resources, IEMP continued its geographic studies in areas such as Baltimore and Santa Clara to further develop strategies for enabling Federal, State, and local governments to jointly develop efficient environmental controls for particular geographic areas. It also initiated a series of smaller projects that are operated at the State or Regional level. In addition, IEMP worked on industry studies applicable to such inter-media issues as sludge, ground-water, pretreatment, hazardous waste strategies, and cropland pollution control.

#### OFFICE OF POLICY ANALYSIS

##### 1987 Program Request

The Agency requests a total of \$9,359,800 supported by 62.9 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$553,900 and a decrease of .2 total workyears from 1986. The increase in dollars will help in meeting key deadlines under the Resource Conservation and Recovery Act reauthorization.

In 1987, the Office of Policy Analysis (OPA) will continue to oversee the Agency's implementation of Executive Order 12291. It will produce analyses of the Agency's highest priority regulatory actions including major air issues, geographic-based water quality management, implications of proposed Subtitle D standards, initial deep well ban decisions, and the final leaking underground storage tank regulations as well as non-regulation specific initiatives such as geographic-based environmental management (e.g. Great Lakes region), risk and benefits-based enforcement, and issues associated with carbon dioxide build-up and global climate change. Continuing work on chlorofluorocarbons (CFC's) will support the United States delegation to the international negotiations on CFC's scheduled to begin in 1987. OPA also will continue to perform analyses of risk management across programs. In addition, OPA's Benefits Program will retain its focus on advanced treatment and pesticides and place new emphasis on materials damage assessment, indoor air quality (radon), and region/site specific benefits analysis. Its Economic Research Program will value reduction of pollution in wetlands, analyze the value of various aspects of State enforcement programs, and undertake new work on the valuation of risk reduction at hazardous waste sites.

##### 1986 Program

In 1986, the Agency is allocating a total of \$8,805,900 supported by 63.1 total workyears for this program, all of which is from the Salaries and Expenses appropriation. With these resources, OPA is overseeing implementation of Executive Order 12291, working closely with program offices to evaluate the costs, economic impact, and benefits of prospective regulatory requirements or changes. OPA is

concentrating on hazardous waste issues, concluding studies of the macroeconomic impacts of EPA regulations, undertaking analyses of risk management across programs, and performing studies on the combined economic impact of all EPA regulations on major industries as well as several company-or-plant-specific financial analyses. In addition, OPA is working on a major analysis of the risks and benefits of CFC's and other ozone-depleting substances. Its Benefits Program is incorporating benefits analysis in decisions on construction grants and accelerating an important effort to improve risk/benefit techniques applied by the pesticides program. Lastly, OPA's Economic Research Program is renewing promising cooperative agreements with academic researchers to support the development of data and techniques for performing benefit-cost analyses of environmental regulations.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$9,600,300 supported by 61.5 total workyears for this program, all of which was from the Salaries and Expenses appropriation. OPA focused on reviewing existing regulations and standards, which required intensified cost-benefit and cost-effectiveness analysis. OPA placed additional emphasis on intra-industry and cross-industry cost-effectiveness comparison, thoroughly reviewing its existing data base and upgrading and expanding it as necessary. OPA worked on the Congressionally-mandated "Cost of Clean Air and Water" report and continued its strategic studies which examined the cumulative macroeconomic impacts of EPA's regulations on major industries. Additionally, its Benefits Program pursued major efforts to incorporate benefits analysis in a variety of regulatory situations, including development of the Agency's groundwater strategy. And, its Economic Research Program undertook major studies on the benefits of reducing ozone concentrations and on the effectiveness of different information contents on pesticides labels.

#### OFFICE OF STANDARDS AND REGULATIONS

##### 1987 Program Request

The Agency requests a total of \$4,870,700 supported by 67.8 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$299,000 and a decrease of 1.0 total workyears from 1986. The dollar increase mainly results from adjusting personnel compensation and benefits to meet anticipated requirements based on current staffing patterns. The workyear decrease reflects a slight decrease in the need for chemical integration and coordination work.

With this funding, the Office of Standards and Regulations (OSR) will ensure compliance with Executive Orders 12291 and 12498, the Regulatory Flexibility Act, the Paperwork Reduction Act, and Federal Register requirements by continuing its technical, statistical, and policy review of existing regulations as well as those under development. It also will continue regulatory reform efforts, its lead analyst role in the Agency investigation of potential damage caused by leaking underground storage tanks, and its evaluation of methods to control asbestos effectively.

##### 1986 Program

In 1986, the Agency is allocating a total of \$4,571,700 supported by 68.8 total workyears for this program, all of which is from the Salaries and Expenses appropriation. These resources are allowing OSR to manage the Agency's regulation development and review processes, ensure Agency compliance with the Paperwork Reduction Act of 1980, ensure the technical quality of Agency regulations and policies, improve the statistical quality of Agency regulations and data collection and analysis activities, and ensure integration of the Agency's regulatory programs

on chemicals across program offices. In addition, OSR is continuing to initiate and promote sound regulatory reforms, such as demonstration and implementation of innovative water reforms; development of non-point source strategies for abatement of pollution, including contamination of groundwater; and provision of technical assistance on emissions trading and development of Agency policy on related air program reforms.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$5,000,500 supported by 70.5 total workyears for this program, all of which was from the Salaries and Expenses appropriation. OSR continued its effective management and oversight of the regulation development and review process ensuring compliance with Executive Orders 12291 and 12498, the Regulatory Flexibility Act, the Paperwork Reduction Act, and Federal Register requirements. OSR intensified regulatory reform and relief efforts and continued to concentrate on improving the scientific, engineering, and statistical base for regulations and policies. Negotiation was successfully demonstrated and continued to be used as an alternative regulation development method. OSR published an Agency Environmental Auditing Policy, developed statistical sampling methods for hazardous waste sites, and developed and tested a methodology for setting Agency priorities for regulatory action.

### OFFICE OF MANAGEMENT SYSTEMS AND EVALUATION

#### 1987 Program Request

The Agency requests a total of \$2,611,200 supported by 55.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents a decrease of \$130,100 and a decrease of 4.0 total workyears from 1986. The dollar and workyear reductions primarily reflect transfer of the General Accounting Office liaison function out of the Office of Management Systems and Evaluation (OMSE) to the Immediate Office of OPPE's Assistant Administrator. Dollars also were adjusted to reflect anticipated personnel compensation and benefits based on current staffing levels.

These resources will enable OMSE to assess whether Agency goals and program commitments are being met and what corrective actions should be taken if weaknesses are detected. To accomplish this, OMSE will carry out evaluations of major programs or program components and perform short-term management reviews. It will operate a special tracking system for the Deputy Administrator as well as the management accountability system, ensuring its integration with other Agency management systems. OMSE also will develop agency-wide planning guidance, assist in the development of program strategies, and further develop an integrated Agency strategic planning system encompassing all media. The Regional Administrator's Environmental Management Reports will continue under OMSE auspices as will cooperation between Headquarters and the Regional offices in developing improved indicators of environmental status and trends and improved monitoring strategies.

#### 1986 Program

In 1986, the Agency is allocating a total of \$2,741,300 supported by 59.0 total workyears for this program, all of which is from the Salaries and Expenses appropriation. With this funding, OMSE is assessing the Agency's effectiveness in meeting program goals and commitments by conducting evaluations of major programs, by running the management accountability system, by performing a number of quality assurance reviews, and by developing and recommending corrective actions where the need for improvement is identified. It is developing mechanisms for connecting the accountability system, which measures each program's progress in meeting its goals and commitments, with other Agency management systems. OMSE also is focusing its efforts



on strategic planning, in close cooperation with the program offices. In addition, OMSE is working with Headquarters and Regional offices to develop improved indicators of environmental status and trends, and improved monitoring strategies and is aiding in some of the State Pilot Projects for Improved Environmental Decision Making.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,882,900 supported by 53.9 total workyears for this program, all of which was from the Salaries and Expenses appropriation. OMSE held a pivotal role in helping to develop the Agency's Air Toxics Strategy. It carried out major evaluations on the effectiveness of the National Notification System for Emergency Response to Releases of Hazardous Substances, the implementation of the National Municipal Policy, and Incineration of Liquid Hazardous Wastes. OMSE also took the lead on the Performance-Based Grants Policy Task Force resulting in increased Federal-state coordination. In addition, OMSE expanded efforts to implement and refine the accountability system for the Administrator, designing a fully automated system and developing specialized tracking systems for individual programs.



# **Office of Administration and Resources Management**



# AGENCY MANAGEMENT

## Office of Administration and Resource Management

		ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----								
(DOLLARS IN THOUSANDS)								
PROGRAM								
-----								
Program Management - Administration								
Salaries & Expenses		\$1,292.1	\$1,395.2	\$1,370.5	-\$58.8	\$1,311.7	\$1,359.2	\$47.5
TOTAL		\$1,292.1	\$1,395.2	\$1,370.5	-\$58.8	\$1,311.7	\$1,359.2	\$47.5
Financial Management Headquarters								
Salaries & Expenses and Facilities		\$5,842.0 \$9.5	\$5,032.7	\$5,445.1	-\$234.1	\$5,211.0	\$5,404.4	\$193.4
TOTAL		\$5,851.5	\$5,032.7	\$5,445.1	-\$234.1	\$5,211.0	\$5,404.4	\$193.4
Office of the Comptroller								
Salaries & Expenses Operations, Research and Facilities		\$3,545.5 \$90.0	\$3,253.6	\$3,197.5	-\$136.6	\$3,060.9	\$4,976.6	\$1,915.7
TOTAL		\$3,635.5	\$3,253.6	\$3,197.5	-\$136.6	\$3,060.9	\$4,976.6	\$1,915.7
Contracts and Grants Management								
Salaries & Expenses		\$9,676.5	\$9,355.6	\$10,149.6	-\$436.6	\$9,713.0	\$9,796.8	\$83.8
TOTAL		\$9,676.5	\$9,355.6	\$10,149.6	-\$436.6	\$9,713.0	\$9,796.8	\$83.8
Personnel and Organization Services								
Salaries & Expenses		\$7,256.7	\$7,630.7	\$7,540.1	-\$324.1	\$7,216.0	\$7,472.0	\$256.0
TOTAL		\$7,256.7	\$7,630.7	\$7,540.1	-\$324.1	\$7,216.0	\$7,472.0	\$256.0

# AGENCY MANAGEMENT

## Office of Administration and Resource Management

		ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----								
(DOLLARS IN THOUSANDS)								
Facilities & Management Services								
Salaries & Expenses		\$6,722.4	\$6,930.8	\$6,604.6	-\$284.0	\$6,320.6	\$6,484.8	\$164.2
	TOTAL	\$6,722.4	\$6,930.8	\$6,604.6	-\$284.0	\$6,320.6	\$6,484.8	\$164.2
Information Systems & Services								
Salaries & Expenses		\$6,606.5	\$6,844.8	\$7,313.5	-\$314.5	\$6,999.0	\$7,211.2	\$212.2
	TOTAL	\$6,606.5	\$6,844.8	\$7,313.5	-\$314.5	\$6,999.0	\$7,211.2	\$212.2
Office of Human Resources Management								
Salaries & Expenses		\$1,131.4	\$1,166.3	\$1,192.6	-\$51.2	\$1,141.4	\$1,151.1	\$9.7
	TOTAL	\$1,131.4	\$1,166.3	\$1,192.6	-\$51.2	\$1,141.4	\$1,151.1	\$9.7
TOTAL:								
Salaries & Expenses		\$42,073.1	\$41,609.7	\$42,813.5	-\$1,839.9	\$40,973.6	\$43,856.1	\$2,882.5
Operations, Research and Facilities		\$99.5						
Office of Administration and Resource Management	TOTAL	\$42,172.6	\$41,609.7	\$42,813.5	-\$1,839.9	\$40,973.6	\$43,856.1	\$2,882.5

# AGENCY MANAGEMENT

## Office of Administration and Resource Management

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
<hr/>							
(DOLLARS IN THOUSANDS)							
<hr/>							
PERMANENT WORKYEARS							
<hr/>							
Program Management - Administration	22.2	20.8	21.8		21.8	20.3	-1.5
Financial Management Headquarters	120.1	120.5	131.5		131.5	133.2	1.7
Office of the Comptroller	59.7	61.9	62.9		62.9	61.5	-1.4
Contracts and Grants Management	207.2	214.5	230.3		230.3	219.9	-10.4
Personnel and Organization Services	160.7	160.0	162.0		162.0	159.8	-2.2
Facilities & Management Services	181.8	186.2	179.0		179.0	171.5	-7.5
Information Systems & Services	122.3	121.2	132.2		132.2	130.5	-1.7
Office of Human Resources Management	21.5	23.0	24.0		24.0	22.5	-1.5
TOTAL PERMANENT WORKYEARS	895.5	908.1	943.7		943.7	919.2	-24.5

# AGENCY MANAGEMENT

## Office of Administration and Resource Management

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
-----							
TOTAL WORKYEARS							
-----							
Program Management - Administration	24.0	22.8	22.8		22.8	21.3	-1.5
Financial Management Headquarters	127.9	130.0	141.0		141.0	141.0	
Office of the Comptroller	67.1	69.3	69.3		69.3	67.9	-1.4
Contracts and Grants Management	218.2	222.4	236.2		236.2	225.8	-10.4
Personnel and Organization Services	179.0	179.9	181.7		181.7	178.1	-3.6
Facilities & Management Services	191.3	195.9	186.1		186.1	178.6	-7.5
Information Systems & Services	136.3	138.5	149.3		149.3	144.5	-4.8
Office of Human Resources Management	23.7	24.0	25.0		25.0	23.5	-1.5
TOTAL WORKYEARS	967.5	982.8	1,011.4		1,011.4	980.7	-30.7



## MANAGEMENT AND SUPPORT

### Agency Management

#### Office of Administration and Resources Management

##### Budget Request

The Agency requests a total of \$43,856,100 supported by 980.7 total workyears for 1987, an increase of \$2,882,500 and a decrease of 30.7 total workyears from 1986. All of the request is for the Salaries and Expenses appropriation.

##### Program Description

The Office of Administration and Resources Management (OARM) performs administrative management and support functions to all of EPA, and provides a full range of administrative services to Headquarters and our two largest non-regional field operations -- Research Triangle Park (RTP), North Carolina and Cincinnati, Ohio. The office also controls the Agency's central planning and budgeting process which allocates workyear and financial resources among program areas and ensures adequate funds control. In addition, the office directs a Human Resources Management program for all Agency employees.

The Immediate Office of the Assistant Administrator provides overall program direction and resource management for all office activities, as well as Agencywide administrative support policy. There are six organizational components under the Assistant Administrator for Administration and Resources Management: Office of the Comptroller, Office of Administration, Office of Information Resources Management, Office of Human Resources Management, and the Offices of Administration at Research Triangle Park and Cincinnati. The Office of the Comptroller provides Agencywide financial services as well as budget development and execution activities. The Office of Administration provides services in the areas of personnel administration, facilities management, organizational analysis, contracts and grants management, and occupational health and safety. The Office of Information Resources Management directs the Agency's information resources management program and library services. The Office of Human Resources Management provides workforce planning, career development, and executive management services to EPA employees. Our RTP and Cincinnati offices provide administration services to the environmental programs at EPA's major research locations. A brief description of each of the program elements included in this office follows:

Program Management - Administration -- This component consists of the Assistant Administrator's immediate office which provides oversight, planning functions, and performs all of the budgeting and resource management activities for OARM.

Financial Management - Headquarters -- This component includes financial management, financial policy development, accounting, and financial reporting activities for Headquarters and field offices.

Office of the Comptroller -- This component develops and operates EPA's program planning and budgeting system; analyzes and prepares Agency budgets for submission to Congress and OMB; maintains the Agency's allocation, control, and review system for all workyear and financial resources; and oversees EPA's management efficiency programs.

Contracts and Grants Management -- This component establishes Agencywide contracts and grants policy, awards and manages Headquarters grants and other financial assistance programs, and awards and administers contracts and small purchases at Headquarters, Research Triangle Park, and Cincinnati.

Personnel and Organization Services -- This component provides personnel services at Headquarters, Cincinnati, and Research Triangle Park, as well as Agencywide management analysis, and occupational health and safety functions.

Facilities and Management Services -- This component provides facilities management services to EPA operations in Headquarters, Cincinnati, and Research Triangle Park.

Information Systems and Services -- This component provides Agencywide ADP systems management as well as library services at Headquarters, Cincinnati, and Research Triangle Park.

Human Resources Management -- This component provides Agencywide workforce planning, career development, and executive management services to EPA employees.

#### PROGRAM MANAGEMENT - ADMINISTRATION

##### 1987 Program Request

The Agency requests a total of \$1,359,200 supported by 21.3 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$47,500 and a decrease of 1.5 total workyears from 1986. The decrease in workyears reflects a reduction to the staffing level in the Assistant Administrator's Immediate Office. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. In 1987, the office will continue to provide guidance and direction as well as program and administrative support for OARM, direct and manage OARM's resources, administer and report on OARM's portions of the Administrator's Action Tracking System and the Strategic Planning and Management System, and conduct strategies to enhance the efficiency and effectiveness of the Agency.

##### 1986 Program

In 1986, the Agency is allocating a total of \$1,311,700 supported by 22.8 total workyears for this program, all of which is from the Salaries and Expenses appropriation. These resources are used for overall policy direction and guidance to the Agency's management programs, review of organization and consolidation issues, continued strengthening of EPA's financial, budgetary, contracts, and information resources management programs, as well as initiation of management effectiveness strategies within the Agency.

##### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,292,100 supported by 24.0 total workyears for this program all of which was from the Salaries and Expenses appropriation. These resources were used to provide office-wide management and policy direction, manage the development and execution of OARM's budget, provide Action Tracking and Strategic Planning and Management reports, and conduct special analyses and projects on Agencywide management issues.

## FINANCIAL MANAGEMENT - HEADQUARTERS

### 1987 Program Request

The Agency requests a total of \$5,404,400 supported by 141.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$193,400 and no change in total workyears from 1986. The increase will provide for further automation as a result of financial management initiatives from the Department of Treasury, the General Accounting Office and the Office of Management and Budget. The office's priorities in 1987 will include the following initiatives: implement Office of Management and Budget's Circular A-127 requirements, implement Section 4 of the Federal Managers' Financial Integrity Act of 1982, increase the timeliness of contracts processed as required by the Prompt Payment Act, explore further cash management initiatives, and bring the Financial Management System into full compliance with General Accounting Office standards.

These resources will also provide the necessary workyears for the program to improve the overall quality of financial and accounting services throughout the Agency, provide financial reports to meet Office of Management and Budget and Treasury requirements, manage the Agency's Financial Management System, and develop and refine Agency financial policies and procedures.

### 1986 Program

In 1986, the Agency is allocating a total of \$5,211,000 supported by 141.0 total workyears for this program, all of which is from the Salaries and Expenses appropriation. These resources provide a full array of financial services to EPA managers, including payroll, accounting, debt collection, accounts payable and policy guidance. This program manages the Agency's Financial Management System. The 1986 program emphasis is on improving the financial services provided by Headquarters and Research Triangle Park financial operations, the development of standard quality assurance programs for the Agency, development of a long-term planning process for the Financial Management System, completion of a Comptroller Directives System for consolidation of all financial policies and procedures, and transfer of the software programs to operate the Financial Management System at the National Computer Center.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$5,851,500 supported by 127.9 total workyears, of which \$5,842,000 was from the Salaries and Expenses appropriation and \$9,500 was from the Operations, Research, and Facilities appropriation. With these resources, the Agency provided routine financial services, automated various payroll activities, developed financial policy, performed internal control reviews, performed accounting systems reviews to assure compliance with the new standards of internal control established by the Comptroller General of the United States, continued a comprehensive cash management program, including implementation of the Diners Club Program and Treasury's Letter of Credit process, and maintained adequate financial controls for the Agency.

## OFFICE OF THE COMPTROLLER

### 1987 Program Request

The Agency requests a total of \$4,976,600 supported by 67.9 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$1,915,700 and a decrease of 1.4 total work-

years from 1986. The increase in funds is for the continued implementation of OMB Circular A-127, a major initiative which will integrate and improve the Agency's financial management systems. The decrease in total workyears results from the increased use of office automation in budget analysis and reporting functions.

These resources will provide the Office of the Comptroller with the capabilities to perform all mandatory activities associated with OMB and Congressional budget submissions for 1987 and 1988, provide budget analyses and reports to Agency program offices through the Resource Planning and Budgeting System, and maintain an allocation, control and review system for all workyear and financial resources. The office will focus on implementing EPA's Productivity Improvement Initiative, which will reduce costs and enhance program effectiveness across the Agency. The Comptroller will also continue to implement the Federal Managers' Financial Integrity Act, and implement OMB Circular A-76.

#### 1986 Program

In 1986, the Agency is allocating a total of \$3,060,900 supported by 69.3 total workyears for this program, all of which is from the Salaries and Expenses appropriation. With these resources the Office of the Comptroller develops current and outyear budget guidance to program and Regional offices, analyzes budget issues, develops and implements Agency budget policy, and administers and provides policy guidance to EPA managers on a range of fiscal concerns. Particular emphasis is being placed on improving funds control and budget planning. The office is also leading the Agency's effort to implement OMB Circular A-127.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$3,635,500 supported by 67.1 total workyears for this program, of which \$3,545,500 was from the Salaries and Expenses appropriation and \$90,000 was from the Operations, Research, and Facilities appropriation. With these resources, this program managed the development of the 1986 Operating Plans, provided budget and policy guidance to program and Regional offices for the 1987 budget request, performed oversight of audit resolution and follow-up, implemented the Federal Managers' Financial Integrity Act, and began EPA's Productivity Improvement Initiative.

#### CONTRACTS AND GRANTS MANAGEMENT

##### 1987 Program Request

The Agency requests a total of \$9,796,800 supported by 225.8 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$83,800 and a decrease of 10.4 total workyears from 1986. The decrease in workyears reflects anticipated reductions in the contracts and grants workload during 1987. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions.

In the contracts area, the request will enable the Agency to process and award new contracts and purchase orders, manage and close out existing contracts, evaluate contractor cost proposals, process contract terminations and claims, and provide technical review, policy compliance, and administrative oversight and management to the three contracting and purchasing offices in Headquarters, Cincinnati, and Research Triangle Park (RTP).

In the grants area, these funds will allow the Agency to develop and interpret policy and procedural guidance for Agencywide assistance programs, award and administer Headquarters grants, cooperative agreements, and interagency agreements, respond to requests for assistance from Regions and Federal assistance recipients,

continue to modify, update, and simplify our assistance regulations, increase in-house audit and cost analyses, increase noncompliance efforts against program participants who abuse the privileges of Federal assistance, and meet OMB Circular A-127 requirements.

#### 1986 Program

In 1986, the Agency is allocating a total of \$9,713,000 supported by 236.2 total workyears for this program, all of which is from the Salaries and Expenses appropriation. These resources are being used to perform a full range of grants and contracts activities that include awarding and administering contracts, grants, loans, purchase orders, and interagency agreements. This also includes negotiating indirect cost rates, processing terminations and claims, providing administrative management over contracting offices at Headquarters, Cincinnati and RTP, developing suspension and debarment cases under EPA assistance and procurement programs, addressing policy development, internal review and systems management issues in both the contracts and grants areas, supporting A-127 initiatives, instituting a new automated assistance document system, and providing project officer training.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$9,676,500 supported by 218.2 total workyears for this program, all of which was from the Salaries and Expenses appropriation. The major accomplishments in this program area included increased emphasis on contract management, continued implementation of the Federal Acquisition Regulation, improving the contract planning system and automated procurement document system, implementing the new Asbestos School Hazard Abatement Program, developing the Grants Information System Management Council, continuing to simplify grants procedures, and taking noncompliance actions against and recovering Federal funds from program participants who abuse the privileges of Federal assistance.

#### PERSONNEL AND ORGANIZATION SERVICES

##### 1987 Program Request

The Agency requests a total of \$7,472,000 supported by 178.1 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$256,000 and a decrease of 3.6 total workyears from 1986. The decrease in total workyears reflects an anticipated reduced rate of hiring during 1987. The increase will provide for increased operating costs.

This program will continue to perform ongoing personnel functions including recruitment, position management, classification, performance management, pay administration, personnel and payroll processing, labor-management and employee-management relations, personnel information systems management, equal opportunity employment, and technical assistance and advisory services. Efforts will also focus on performing management and organization improvement analyses, managing delegations of authority and reorganizations, developing Agency forms, overseeing EPA public advisory committees, and directing the Agency's directives system. Finally, the program will continue coordination and management of Agencywide health and safety programs.

#### 1986 Program

In 1986, the Agency is allocating a total of \$7,216,000 supported by 181.7 total workyears for this program, all of which is from the Salaries and Expenses appropriation. These resources support high quality and responsive personnel services, implementation of human resources initiatives including improvement to

the Performance Management System and development of a comprehensive curriculum for managers, improved utilization of personnel information systems including development of core management reports, and continued support to meet the Agency's specialized recruitment needs. The resources also provide for performance of additional management reviews with the primary focus on Headquarters offices, expansion of management and organization services to Regional and Headquarters offices, implementation of Agency health and safety programs, development of Environmental Compliance Audit Guidelines, and performance of environmental compliance audits for EPA facilities.

#### 1985 Accomplishments

In 1985, the Agency allocated a total of \$7,256,700 supported by 179.0 total workyears for this program, all of which was from the Salaries and Expenses appropriation. With these resources the Agency continued efforts to meet specialized and hard-to-fill recruitment needs, conducted an Agencywide Performance Management System (PMS) survey, issued a comprehensive PMS planning package, designed a new award for unusually outstanding merit pay employees, developed a labor relations handbook for supervisors, conducted negotiations with employee unions on sensitive management issues, and expanded automated personnel data bases and improved information systems capabilities. These resources also provided management assistance to virtually every EPA office resulting in organizational and management improvements ranging from strengthened management processes to streamlined organizational arrangements.

#### FACILITIES AND MANAGEMENT SERVICES

##### 1987 Program Request

The Agency requests a total of \$6,484,800 supported by 178.6 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$164,200 and a decrease of 7.5 total workyears from 1986. The reduction in workyears represents a decrease in staff for the Headquarters printing and publication activities, as well as consolidation of like facilities functions and elimination of nonessential services. The increase will provide for increased operating costs. With these resources the Agency will administer the Nationwide Support, Headquarters Support, and Buildings and Facilities budgets, provide operational support and housekeeping services, and monitor and direct contractor resources under support contracts.

##### 1986 Program

In 1986, the Agency is allocating a total of \$6,320,600 supported by 186.1 total workyears for this program, all of which is from the Salaries and Expenses appropriation. These funds are being used to provide timely, high quality and cost effective facilities management and support services for EPA facilities in Washington, Research Triangle Park (RTP), North Carolina and Cincinnati, Ohio. These resources provide ongoing services in the areas of property and space management, building operational services, office support services, real estate and lease enforcement support, transportation management, printing and publication operations, security services, and facilities design and construction management.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$6,722,400 supported by 191.3 total workyears for this program, all of which was from the Salaries and Expenses appropriation. With these resources the Agency provided facilities management services to EPA facilities in Washington, RTP and Cincinnati, established better administrative controls over property management, managed space needs and provided security services.

In addition, the Agency administered the Buildings and Facilities program which included managing health and safety improvements and routine and emergency repairs to our facilities across the country. This program supervised the start of construction of the wildlife toxicology facility for the Environmental Research Laboratory at Corvallis, Oregon, and the pollution statement facility at the Environmental Research Laboratory in Narragansett, Rhode Island. The program also initiated the design of a full containment facility in Cincinnati, Ohio and a new radiation laboratory in Montgomery, Alabama.

## INFORMATION SYSTEMS AND SERVICES

### 1987 Program Request

The Agency requests a total of \$7,211,200 supported by 144.5 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$212,200 and a decrease of 4.8 total workyears from 1986. The decrease in workyears results from the increased use of contractors for support services. The increase will provide for increased operating costs. The requested resources will enable the Agency to maintain current, centrally administered information systems and services in support of EPA programs and the public. This program will provide the personnel to manage the Agency's central and distributed computing and data transmission network, its major administrative and programmatic data systems and library services. In addition, these resources will permit the Agency to continue to develop a program of information resources management including long and short-range Automated Data Processing (ADP) planning, ADP security, records management, software and data standards, and internal controls on information resources. Particular emphasis will be placed on providing technical support for the Regional ADP Modernization effort.

### 1986 Program

In 1986, the Agency is allocating a total of \$6,999,000 supported by 149.3 total workyears for this program, all of which is from the Salaries and Expenses appropriation. This level of funding includes the transfer of voice communications functions from the Office of Administration to the Office of Information Resources Management as part of an effort to integrate voice and data communications planning and management.

Also during 1986, particular emphasis is being placed on improved information systems planning by EPA programs, strengthening information security, and continuing the program to implement and update Agency financial management systems in response to General Accounting Office (GAO) and Executive Branch requirements. In addition, the Agency is establishing more vigorous software engineering standards as part of a program to assure cost-effective performance by ADP systems contractors.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$6,606,500 supported by 136.3 total workyears for this program, all of which was from the Salaries and Expenses appropriation. During 1985, particular emphasis was placed on improving the Agency's enforcement and hazardous waste information systems. In addition, the Agency updated its accounting systems in response to GAO requirements and strengthened internal controls in the Agency payroll and accounts receivable systems.

## OFFICE OF HUMAN RESOURCES MANAGEMENT

### 1987 Program Request

The Agency requests a total of \$1,151,100 supported by 23.5 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$9,700 and a decrease of 1.5 total workyears from 1986. The decrease in workyears reflects a lower workyear need due to completion of the initial planning phases of career development and workforce planning activities. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. This level of funding will allow the Agency to continue its initiative to develop its workforce to meet future needs and skill mix requirements. Also, the Office of Human Resources Management will continue to design and implement a comprehensive program to focus on career and organizational development, workforce planning, and senior executive management.

### 1986 Program

In 1986, the Agency is allocating a total of \$1,141,400 supported by 25.0 total workyears for this program, all of which is from the Salaries and Expenses appropriation. These resources are being used to build a total career development system at EPA and provide workforce planning and management guidance to help EPA anticipate its hiring and retraining needs. A training institute is being established to use in-house employees to meet part of the Agency's training needs. In addition, these resources are used to perform personnel operations for Senior Executive Service (SES) members and to develop a human resources information system.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,131,400 supported by 23.7 total workyears for this program, all of which was from the Salaries and Expenses appropriation. During this first full year of program operation, work began on career development programs for the Agency's scientific, technical, and managerial employees. Workforce planning pilot studies were initiated, and personnel operations for the Senior Executive Service were improved.



# **Regional Management**



ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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# REGIONAL MANAGEMENT

## Regional Management

		ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----								
(DOLLARS IN THOUSANDS)								
-----								
PROGRAM								
-----								
Resource Management -								
Regions								
Salaries & Expenses		\$1,396.2	\$1,537.7	\$1,638.7	-\$70.5	\$1,568.2	\$1,547.2	-\$21.0
TOTAL		\$1,396.2	\$1,537.7	\$1,638.7	-\$70.5	\$1,568.2	\$1,547.2	-\$21.0
Financial Management -								
Regions								
Salaries & Expenses		\$2,733.7	\$2,816.6	\$2,771.7	-\$119.2	\$2,652.5	\$2,693.4	\$40.9
TOTAL		\$2,733.7	\$2,816.6	\$2,771.7	-\$119.2	\$2,652.5	\$2,693.4	\$40.9
Personnel Management -								
Regions								
Salaries & Expenses		\$3,293.1	\$3,228.1	\$3,148.8	-\$135.3	\$3,013.5	\$3,015.1	\$1.6
TOTAL		\$3,293.1	\$3,228.1	\$3,148.8	-\$135.3	\$3,013.5	\$3,015.1	\$1.6
Administrative								
Management - Regions								
Salaries & Expenses		\$5,713.0	\$5,512.9	\$5,608.7	-\$241.2	\$5,367.5	\$5,492.5	\$125.0
TOTAL		\$5,713.0	\$5,512.9	\$5,608.7	-\$241.2	\$5,367.5	\$5,492.5	\$125.0
Regional Management								
Salaries & Expenses		\$9,710.6	\$9,053.5	\$9,351.3	-\$402.1	\$8,949.2	\$9,389.7	\$440.5
TOTAL		\$9,710.6	\$9,053.5	\$9,351.3	-\$402.1	\$8,949.2	\$9,389.7	\$440.5
Regional Counsel								
Salaries & Expenses		\$3,568.9	\$3,745.7	\$3,772.2	-\$162.2	\$3,610.0	\$3,827.0	\$217.0
TOTAL		\$3,568.9	\$3,745.7	\$3,772.2	-\$162.2	\$3,610.0	\$3,827.0	\$217.0

# REGIONAL MANAGEMENT

## Regional Management

		ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----								
(DOLLARS IN THOUSANDS)								
Planning, Evaluation & Analysis - Regions								
Salaries & Expenses		\$2,358.5	\$2,640.2	\$2,525.6	-\$108.6	\$2,417.0	\$2,432.1	\$15.1
	TOTAL	\$2,358.5	\$2,640.2	\$2,525.6	-\$108.6	\$2,417.0	\$2,432.1	\$15.1
TOTAL:								
Salaries & Expenses		\$28,774.0	\$28,534.7	\$28,817.0	-\$1,239.1	\$27,577.9	\$28,397.0	\$819.1
Regional Management	TOTAL	\$28,774.0	\$28,534.7	\$28,817.0	-\$1,239.1	\$27,577.9	\$28,397.0	\$819.1

## PERMANENT WORKYEARS

Resource Management - Regions		36.5	38.1	38.8		38.8	37.8	-1.0
Financial Management - Regions		87.3	84.1	83.4		83.4	81.6	-1.8
Personnel Management - Regions		96.0	84.2	85.0		85.0	83.2	-1.8
Administrative Management - Regions		158.0	151.6	152.9		152.9	149.6	-3.3
Regional Management		182.7	179.8	173.2		173.2	172.9	-.3
Regional Counsel		72.8	72.8	73.4		73.4	73.4	
Planning, Evaluation & Analysis - Regions		54.0	57.6	54.8		54.8	54.0	-.8
TOTAL PERMANENT WORKYEARS		687.3	668.2	661.5		661.5	652.5	-9.0

## REGIONAL MANAGEMENT

## Regional Management

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
TOTAL WORKYEARS							
-----							
Resource Management - Regions	40.7	42.5	42.5		42.5	41.5	-1.0
Financial Management - Regions	99.0	92.6	92.6		92.6	90.8	-1.8
Personnel Management - Regions	110.3	95.9	95.9		95.9	94.1	-1.8
Administrative Management - Regions	184.4	170.9	170.9		170.9	167.6	-3.3
Regional Management	220.4	198.2	194.9		194.9	194.5	-.4
Regional Counsel	78.9	80.2	80.2		80.2	80.2	
Planning, Evaluation & Analysis - Regions	59.8	61.1	61.1		61.1	60.1	-1.0
TOTAL WORKYEARS	793.5	741.4	738.1		738.1	728.8	-9.3

## MANAGEMENT AND SUPPORT

### Regional Management

#### Budget Request

The Agency requests a total of \$28,397,000 supported by 728.8 total workyears for 1987, an increase of \$819,100 and a decrease of 9.3 total workyears from 1986. All of the request is for the Salaries and Expenses appropriation.

#### Program Description

This program contains the following program elements:

Resource Management - Regions -- This component provides resources to develop Regional budgets and operating plans, participate in the workload analysis process, manage current year resources, and enhance resource management and control in the Regions.

Financial Management - Regions -- This component provides financial accounting and reporting services for the Regional offices.

Personnel Management - Regions -- This component provides basic personnel services, including staffing, classification, and training to the Regional offices.

Administrative Management - Regions -- This component includes mini-computer systems management, library support, safety, security, printing and copying, facilities management, small purchases, and other administrative functions.

Regional Management -- This component includes the Regional Administrators and their immediate staffs, as well as the basic staff functions of Civil Rights.

Regional Counsel -- This component includes the Offices of Regional Counsel which assist the Regional Administrators in ensuring that their decisions are legally defensible and consistent with national legal interpretations. They represent the Regional office in defensive litigation activities; review Regional rulemakings; assist States in obtaining delegation of programs; and support the Regional enforcement litigation program.

Planning, Evaluation, and Analysis - Regions -- This component includes resources that provide analytical support to the Regional Administrators to assure the efficient and effective operation of EPA Regions. Activities include planning, accountability reporting, program evaluation, economic analysis, management, and Regional participation in EPA's regulatory process.

#### RESOURCE MANAGEMENT - REGIONS

##### 1987 Program Request

The Agency requests a total of \$1,547,200 supported by 41.5 total workyears, all of which will be for the Salaries and Expenses appropriation. This represents a decrease of \$21,000 and 1.0 total workyear from 1986. The decrease in resources results from the increased use of office automation. This level of funding supports Regional resource management and control activities including budget and operating plan development and workload analysis. In addition, these resources will allow the Regional offices to continue implementing the Federal Managers' Financial Integrity Act and further strengthen funds control.

### 1986 Program

In 1986, the Agency is allocating a total of \$1,568,200 supported by 42.5 total workyears, all of which is from the Salaries and Expenses appropriation. These resources are being used to conduct budgeting and resource analysis functions in the ten Regional offices.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,396,200 supported by 40.7 total workyears, all of which was from the Salaries and Expenses appropriation. These resources allowed Regional Administrators to effectively and efficiently manage their resources and operating plan processes.

## FINANCIAL MANAGEMENT - REGIONS

### 1987 Program Request

The Agency requests a total of \$2,693,400 supported by 90.8 total workyears, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$40,900 and a decrease of 1.8 total workyears from 1986. The decrease in total workyears reflects improved productivity resulting from the emphasis on automation of basic finance functions including the automation of various payroll activities and implementation of the Treasury's letter of credit payment system. The dollar increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. This level of funding will allow the Financial Management Offices to provide basic financial services and maintain ongoing financial management functions. The Financial Management Offices will continue to provide accounting, payment processing, billings and collections for grants, travel, payroll, contracts, purchase orders, and all other financial transactions, as well as payroll support and general ledger activities.

### 1986 Program

In 1986, the Agency is allocating a total of \$2,652,500 supported by 92.6 total workyears, all of which is from the Salaries and Expenses appropriation. These resources are being used to provide the Regions with accounting, payment processing, payroll support, financial reporting services, and comprehensive financial management.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,733,700 supported by 99.0 total workyears, all of which was from the Salaries and Expenses appropriation. With these resources, the Financial Management Offices provided a full range of financial management services including the implementation of the Diners Club Program, automated payroll data entry system, and Treasury's letter of credit payment system.

## PERSONNEL MANAGEMENT - REGIONS

### 1987 Program Request

The Agency requests a total of \$3,015,100 supported by 94.1 total workyears, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$1,600 and a decrease of 1.8 total workyears from 1986. The decrease in resources reflects an anticipated reduced rate of hiring during 1987. The dollar increase reflects adjustments to the 1986 base as part of government-wide



deficit reductions. The resources provided will allow Regional Personnel Offices to meet basic regulatory requirements and maintain current service levels. These services include processing recruitment and classification actions, entering data and updates to the Agency's payroll system, providing advisory services and reorganization reviews, administering the grievance system, negotiation with unions, and managing the Performance Management and Recognition System.

#### 1986 Program

In 1986, the Agency is allocating a total of \$3,013,500 supported by 95.9 total workyears, all of which is from the Salaries and Expenses appropriation. These resources are being used to process recruitment, staffing and classification actions, perform position management and pay administration, process personnel and payroll transactions, administer grievance system and disciplinary action procedures, provide employment development and training, consult and negotiate with local unions, conduct special studies, and advise Regional managers on the above functions.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$3,293,100 supported by 110.3 total workyears, all of which was from the Salaries and Expenses appropriation. With these resources, the Regional Personnel Offices provided ongoing personnel services to support the accomplishment of the Regions' program operations and goals, with emphasis on staffing needs for the Hazardous Waste program, better training programs for Regional employees, and initiation of human resources management programs.

#### ADMINISTRATIVE MANAGEMENT - REGIONS

##### 1987 Program Request

The Agency requests a total of \$5,492,500 supported by 167.6 total workyears, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$125,000 and a decrease of 3.3 total workyears from 1986. The decrease in total workyears reflects cost savings from productivity improvements and the use of contractors for support services. The dollar increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. These resources will allow the Regions to provide administrative management services that include maintaining administrative information systems and minicomputer operations, ensuring effective ADP operations support for Regional programs, managing word processing equipment and ADP systems acquisition, maintaining Regional library operations, coordinating Regional records management, directing contracting and purchasing activities, ensuring the safety and security of Regional personnel, managing property and supplies, providing general office services and providing program management for all support services.

##### 1986 Program

In 1986, the Agency is allocating a total of \$5,367,500 supported by 170.9 total workyears, all of which is from the Salaries and Expenses appropriation. These resources are being used to provide the Regions with administrative management activities in the areas of information management, small purchases and procurements, health and safety, and facilities support.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$5,713,000 supported by 184.4 total workyears, all of which was from the Salaries and Expenses appropriation. With these resources, the Regions provided a full complement of administrative management services including strengthened contracts management. In addition, they began implementation of information management plans, including the increased use of personal computers, and integrated electronic telecommunications lines to achieve cost savings and productivity gains.

### REGIONAL MANAGEMENT

#### 1987 Program Request

The Agency requests a total of \$9,389,700 supported by 194.5 total workyears, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$440,500 and a decrease of 0.4 in total workyears from 1986. The decrease in total workyears results from a reduction in administrative personnel. The dollar increase will facilitate improved environmental policy coordination between the Regions and the States. The budget request will enable the Regional offices to continue to shape and articulate policy for State and local governments; respond to inquiries from Congress, the news media and the public; establish regular communications with public interest, environmental and business groups; and maintain Equal Employment Opportunity and Freedom of Information programs.

#### 1986 Program

In 1986, the Agency is allocating a total of \$8,949,200 supported by 194.9 total workyears, all of which is from the Salaries and Expenses appropriation. Basic press services and media relations activities are being maintained as well as policy guidance and executive direction for the Region as a whole. The program will continue the processing of Freedom of Information (FOI) requests, issuing critical news releases, maintaining a regional Equal Employment Opportunity program, responding to Congressional inquiries, and coordinating EPA involvement in major State environmental issues.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$9,710,600 supported by 220.4 total workyears, all of which was from the Salaries and Expenses appropriation. This program provided support for the Regional Administrators and their immediate staffs, as well as for the basic staff functions of public affairs, Congressional and intergovernmental activities, and the equal employment opportunity function.

### REGIONAL COUNSEL

#### 1987 Program Request

The Agency requests a total of \$3,827,000 supported by 80.2 total workyears, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$217,000 and no change in total workyears from 1986. The increase provides for additional personnel and support costs.

The Offices of Regional Counsel will continue to handle all defensive litigation involving principally Regional issues. They will provide advice and counsel to Regional programs; review Regional rulemaking actions; assist States by reviewing State program delegations and advising State agencies on obtaining adequate legal

authorities; and support Agency contract and assistance programs through resolution of grant appeals, bid protests, and debarment and suspension actions. Special emphasis will be placed on providing legal support to the reauthorized Resource Conservation and Recovery Act.

#### 1986 Program

In 1986, the Agency is allocating a total of \$3,610,000 supported by 80.2 total workyears, all of which is from the Salaries and Expenses appropriation. The Offices of Regional Counsel handle all defensive litigation involving principally Regional issues. They provide advice and counsel to Regional programs; review Regional rulemaking actions; and assist States by reviewing State program delegations and advising State agencies on obtaining adequate legal authorities. Additionally, the Regional Counsels continue to support Agency contract and assistance programs through resolution of grant appeals, bid protests, and debarment suspension actions.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$3,568,900 supported by 78.9 total workyears, all of which was from the Salaries and Expenses appropriation. In 1985, the Regional Counsels supported Agency priorities by providing legal advice and support to Regional managers and defending the Agency in all litigation filed against it. They also advised on actions such as grants, contracts, and personnel actions. Additionally, Regional Counsel activities included advising State agencies on the legal requirements for assuming environmental protection programs, assisting in drafting appropriate regulatory language, and helping negotiate and document the terms of delegation agreements.

#### PLANNING, EVALUATION, AND ANALYSIS - REGIONS

##### 1987 Program Request

The Agency requests a total of \$2,432,100 supported by 60.1 total workyears, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$15,100 and a decrease of 1.0 total workyear from 1986. The work-year decrease results from less emphasis on Regional economic analysis. The dollar increase reflects adjustments to the 1986 base as part of government-wide deficit reductions.

This funding will provide the Regional Administrators with the planning, evaluation and analysis support needed to successfully manage the Regional offices. Support will include directing Regional resources to carry out specific management objectives identified in the Strategic Planning and Management System. Managing for environmental results will entail evaluating Regional, State, and local efforts to manage groundwater contamination problems and surveying alternatives to land disposal of hazardous waste. The Regional offices also will provide inter-media perspectives on cross-cutting issues, such as review and evaluation of inter-media non-point source programs and development of a strategy for dealing with those problems. In addition, they will continue to shift Regional programs from an implementation to an oversight role and integrate data which provides the basis for environmental decision-making and cost-effective use of resources, as evidenced in the State Pilot Projects for Improved Environmental Decision Making.

#### 1986 Program

In 1986, the Agency is allocating a total of \$2,417,000 supported by 61.1 total workyears, all of which is from the Salaries and Expenses appropriation. With these resources, the Regions are focusing on automating a priority regula-

tions system governing participation in Agency rulemaking and reviews of proposed significant policy documents; coordinating and evaluating the implementation of the Agency's Performance-Based Grants Policy; developing performancebased grants and integrating them into comprehensive mid-year evaluations of state program performance; and providing support to the Air, Water, and Resource Conservation and Recovery Act programs to develop and implement integrated strategies to streamline Regional efforts and achieve environmental results. They also are participating with other Agency offices in the State Pilot Projects for Improved Environmental Decision-Making currently underway in Oregon, Kansas, Kentucky, New Jersey, and Maryland.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$2,358,500 supported by 59.8 total workyears, all of which was from the Salaries and Expenses appropriation, to conduct the planning, evaluation, and analysis functions in the ten Regional offices. The Regions concentrated on managing for environmental results, improving the annual planning process and utilizing environmental objectives in the planning process, refining accountability systems, analyzing weaknesses in the Agency's monitoring programs, improving monitoring data, developing monitoring strategies, implementing the Delegation and Oversight Policy for State Programs, and regulatory reform.

# **Support Costs**



ENVIRONMENTAL PROTECTION AGENCY

1987 Budget Estimate

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## SUPPORT COSTS

## Support Costs

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
Professional Training							
Salaries & Expenses	\$440.5	\$497.4	\$500.0	-\$21.5	\$478.5	\$520.4	\$41.9
TOTAL	\$440.5	\$497.4	\$500.0	-\$21.5	\$478.5	\$520.4	\$41.9
Nationwide Support							
Services							
Salaries & Expenses	\$51,328.9	\$55,036.4	\$56,111.4	-\$2,414.5	\$53,696.9	\$57,957.7	\$4,260.8
Operations, Research and Facilities	\$51.9						
TOTAL	\$51,380.8	\$55,036.4	\$56,111.4	-\$2,414.5	\$53,696.9	\$57,957.7	\$4,260.8
Headquarters Support							
Services							
Salaries & Expenses	\$32,183.3	\$32,585.6	\$32,529.5	-\$1,398.8	\$31,130.7	\$34,660.1	\$3,529.4
TOTAL	\$32,183.3	\$32,585.6	\$32,529.5	-\$1,398.8	\$31,130.7	\$34,660.1	\$3,529.4
Regional Support							
Services							
Salaries & Expenses	\$24,171.5	\$21,508.4	\$22,981.5	-\$988.1	\$21,993.4	\$23,678.5	\$1,685.1
TOTAL	\$24,171.5	\$21,508.4	\$22,981.5	-\$988.1	\$21,993.4	\$23,678.5	\$1,685.1
Automated Data							
Processing and							
Telecommunications							
Support Costs							
Salaries & Expenses	\$26,362.7	\$23,700.0	\$23,686.2	-\$1,018.6	\$22,667.6	\$26,552.9	\$3,885.3
TOTAL	\$26,362.7	\$23,700.0	\$23,686.2	-\$1,018.6	\$22,667.6	\$26,552.9	\$3,885.3
Lab Support-Research &							
Development							
Salaries & Expenses	\$5,596.2	\$4,631.8	\$5,852.6	-\$251.6	\$5,601.0	\$5,852.6	\$251.6
TOTAL	\$5,596.2	\$4,631.8	\$5,852.6	-\$251.6	\$5,601.0	\$5,852.6	\$251.6



# SUPPORT COSTS

## Support Costs

		ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----								
(DOLLARS IN THOUSANDS)								
PROGRAM								
-----								
Lab Support - Air And Radiation								
Salaries & Expenses		\$1,825.1	\$1,753.2	\$1,753.2	-\$75.3	\$1,677.9	\$1,753.2	\$75.3
	TOTAL	\$1,825.1	\$1,753.2	\$1,753.2	-\$75.3	\$1,677.9	\$1,753.2	\$75.3
Lab Support - Pesticides & Toxic Substances								
Salaries & Expenses		\$244.6	\$251.4	\$251.4	-\$10.8	\$240.6	\$251.4	\$10.8
	TOTAL	\$244.6	\$251.4	\$251.4	-\$10.8	\$240.6	\$251.4	\$10.8
TOTAL:								
Salaries & Expenses		\$142,152.8	\$139,964.2	\$143,665.8	-\$6,179.2	\$137,486.6	\$151,226.8	\$13,740.2
Operations, Research and Facilities		\$51.9						
Support Costs	TOTAL	\$142,204.7	\$139,964.2	\$143,665.8	-\$6,179.2	\$137,486.6	\$151,226.8	\$13,740.2

## MANAGEMENT AND SUPPORT

### Support Costs

#### Budget Request

The Agency requests a total of \$151,226,800 for 1987, an increase of \$13,740,200 from 1986. All of the request is for the Salaries and Expenses appropriation.

#### Program Description

The Agency Support Service components provide funds for general support to all Agency programs except Superfund. Programs under support services are:

Professional Training -- This component provides Agencywide training to executive, supervisory, secretarial, clerical, scientific and technical employees.

Nationwide Support Services -- This component provides Agencywide services for the following support functions: facilities rental and associated costs; payments to the U.S. Postal Service; Federal Telecommunications Service (FTS); nationwide security services; reimbursements to the Federal Employees' Compensation Fund; payments to the Public Health Service for personnel and administrative services for commissioned officers assigned to EPA; and contracts and Intergovernmental Agreements which support EPA's occupational health and safety program, and the finance and payroll systems.

Headquarters Support Services -- This program provides office, building, and information management services to Headquarters and the research center at Research Triangle Park (RTP), North Carolina and Cincinnati, Ohio.

Regional Support Services -- This component provides office, building, and information management services for Regional offices.

Automated Data Processing and Telecommunications Support Costs -- This component provides computing and related data processing services to all Agency programs.

Lab Support - Research and Development -- This component provides support services to the Office of Research and Development's seven remote laboratories (those located outside Cincinnati, and Research Triangle Park). These costs are not covered by the Headquarters Support account, which funds similar items in Headquarters, Cincinnati, and RTP.

Lab Support - Air and Radiation -- This component provides support services to the Motor Vehicle Emissions Laboratory, the Eastern Environmental Radiation Facility, and the Las Vegas facility.

Lab Support - Pesticides and Toxic Substances -- This component provides support services to laboratories in Beltsville, Maryland and Bay St. Louis, Mississippi.

#### PROFESSIONAL TRAINING

##### 1987 Program Request

The Agency requests a total of \$520,400, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$41,900 from 1986. This increase will cover escalated costs for services. This request will maintain current training and development programs mandated by statute and the Office of

Personnel Management (OPM). This program also supports a variety of activities to provide a career development framework for employees. Training programs will be provided to enhance the Agency's scientific and technical expertise, management effectiveness, and clerical support.

#### 1986 Program

In 1986, the Agency is allocating a total of \$478,500, all of which is from the Salaries and Expenses appropriation. These funds are being used to assess training and career development needs and programs, to provide training for Agency employees, and to develop new training and development mechanisms.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$440,500, all of which was from the Salaries and Expenses appropriation. These funds were utilized to provide training in the areas of supervisory management, executive development, clerical skills, and technical and scientific development.

### NATIONWIDE SUPPORT SERVICES

#### 1987 Program Request

The Agency requests a total of \$57,957,700, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$4,260,800 from 1986. The increase will cover space rental rate increases as well as cost escalations to service contracts. These funds will pay for Agencywide support costs including space rental, postage, FTS and telecommunications costs, national security, Code of Federal Regulations typesetting, unemployment compensation, workmen's compensation, health and safety studies, and personnel support for Public Health Service commissioned officers.

#### 1986 Program

In 1986, the Agency is allocating a total of \$53,696,900, all of which is from the Salaries and Expenses appropriation. These resources are being used by the Agency to provide efficient nationwide services to the Agency workforce.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$51,380,800, of which \$51,328,900 was from the Salaries and Expenses appropriation and \$51,900 was from the Operations, Research, and Facilities appropriation. These resources allowed the Agency to launch several Nationwide Support efforts in the areas of space planning, telecommunications, information security, and personal property management. These resources also assisted Regional offices in relocating from asbestos contaminated environments.

### HEADQUARTERS SUPPORT SERVICES

#### 1987 Program Request

The Agency requests a total of \$34,660,100, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$3,529,400 from 1986. The increase will cover cost escalations to service contracts, as well as rate increases in a number of support areas (e.g., telephones, utilities,

etc.). These resources will provide ongoing Headquarters Support services including motor pool, printing and copying, telephones, utilities, facilities operations and maintenance, mail distribution, and ADP technical support to EPA operations in Washington, Research Triangle Park (RTP), North Carolina, and Cincinnati, Ohio.

#### 1986 Program

In 1986, the Agency is allocating a total of \$31,130,700, all of which is from the Salaries and Expenses appropriation. These resources are being used to provide ongoing office, building, and information management services to EPA operations in Washington, RTP, and Cincinnati. With this funding level the Agency is continuing to operate and manage EPA facilities, provide office supply/support services, and develop, operate and enhance management information systems. Additionally, the Agency is developing operating plans for new delegations of authority for lease enforcement/building operations at Headquarters facilities, and refining procedures for property management/inventory control.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$32,183,300, all of which was from the Salaries and Expenses appropriation. These resources provided basic Headquarters Support services to EPA operations in Washington, RTP, and Cincinnati. In addition, these resources supported the preparation of additional office space in the North East Mall, and continued implementation of electronic security systems.

#### REGIONAL SUPPORT SERVICES

##### 1987 Program Request

The Agency requests a total of \$23,678,500, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$1,685,100 from 1986 to allow for increased operating costs. This level of resources will provide the ten Regional offices with basic support services including printing and copying, minicomputer operations, utilities, mail, telephone, library operations, general training, and office and laboratory facility maintenance. These funds will also help to meet the demand for technical and laboratory support.

#### 1986 Program

In 1986, the Agency is allocating a total of \$21,993,400, all of which is from the Salaries and Expenses appropriation. These resources are being used to provide effective and efficient office, building, and information management services to the Regions.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$24,171,500, all of which was from the Salaries and Expenses appropriation. These funds provided ongoing support services in the Regions, including improved property management and better safety and security for EPA employees. Also, the Regions continued efforts to contract out appropriate support services, provided minicomputer operations to increase Regional productivity, and in some Regions achieved significant gains through space consolidation.

## AUTOMATED DATA PROCESSING AND TELECOMMUNICATIONS SUPPORT COSTS

### 1987 Program Request

The Agency requests a total of \$26,552,900, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$3,885,300 from 1986. This increase will enable the Agency to continue its program to replace obsolete computers in its ten Regional offices as well as cover increased costs for computing services. With this level of resources we will maintain current computing services in support of all Agency programs, exclusive of Superfund. These funds will be used to acquire, maintain and operate computing hardware and systems software at the Agency's National Computer Center; provide central management and technical support of the Agency's distributed computing resources; and operate a telecommunications network linking these central and distributed computing systems.

### 1986 Program

The Agency is allocating a total of \$22,667,600, all of which is from the Salaries and Expenses appropriation. These funds are being used to maintain current computing services in support of all Agency programs, exclusive of Superfund. These services include acquiring, maintaining, and operating computing hardware and systems software at the Agency's National Computer Center; central management and technical support of the Agency's distributed computing resources; and operating a data communications network linking these central and distributed computing systems.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$26,362,700, all of which was from the Salaries and Expenses appropriation. The Agency used these funds to complete the modernization of its mainframe computing systems, install more efficient telecommunications services to the EPA Regions and major laboratory centers, and begin replacing obsolete computing systems in the EPA Regional offices.

## LAB SUPPORT - RESEARCH AND DEVELOPMENT

### 1987 Program Request

The Agency requests a total of \$5,852,600, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$251,600 from 1986. The increase reflects increased operating expenses. Funds provide for essential services required to operate and maintain ORD's seven remote laboratories located in Athens, Georgia; Ada, Oklahoma; Corvallis, Oregon; Duluth, Minnesota; Narragansett, Rhode Island; Gulf Breeze, Florida; and Las Vegas, Nevada. Services include, but are not limited to, facilities operation and maintenance, janitorial and guard services, local telephone services, utilities, and equipment operations, maintenance, and rental costs.

### 1986 Program

In 1986, the Agency is allocating a total of \$5,601,000, all of which is from the Salaries and Expenses appropriation. This program provides funds for the operation and maintenance of ORD's seven remote laboratories.

### 1985 Accomplishments

The Agency obligated a total of \$5,596,200, all of which was from the Salaries and Expenses appropriation. Funds provided for the operation and maintenance of remote laboratories.

### LAB SUPPORT - AIR AND RADIATION

#### 1987 Program Request

The Agency requests a total of \$1,753,200, all of which will be for the Salaries and Expenses appropriation. This represents an increase of \$75,300 from 1986. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. This program will support the Motor Vehicle Emissions Laboratory (MVEL) in Ann Arbor, Michigan; the Eastern Environmental Radiation Facility (EERF) in Montgomery, Alabama; and the Las Vegas radiation facility in Nevada. These funds provide basic operation and maintenance support at these locations. Support provided consists of security, janitorial and maintenance services, utilities, GSA vehicles, supplies and materials, and communications.

#### 1986 Program

In 1986, the Agency is allocating \$1,677,900, all of which is from the Salaries and Expenses appropriation. The 1986 program is providing the same types of activities described for 1987: basic laboratory operations, maintenance and supplies. These activities are required on a continuing basis.

### 1985 Accomplishments

In 1985, the Agency obligated a total \$1,825,100, all of which was from the Salaries and Expenses appropriation. These funds provided the basic facilities operations and maintenance costs necessary to operate the three laboratories.

### LAB SUPPORT - PESTICIDES AND TOXIC SUBSTANCES

#### 1987 Program Request

The Agency requests a total of \$251,400, all of which will be for the Salaries and Expenses Appropriation. This represents an increase of \$10,800 from 1986. The increase reflects adjustments to the 1986 base as part of government-wide deficit reductions. These funds will be used for basic facilities and operations and maintenance costs for the laboratories in Beltsville, Maryland and Bay St. Louis, Mississippi. These costs include utilities, security, communications, warehousing, custodial services, and building maintenance.

#### 1986 Program

In 1986, the Agency is allocating a total of \$240,600 all of which is from the Salaries and Expenses appropriation. The 1985 program supports the facilities, operations, and maintenance costs of the Office of Pesticides and Toxic Substances' laboratories.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$244,600, all of which was from the Salaries and Expenses appropriation. The funds were used to obtain the continued requirements for general support and maintenance.

# **Buildings and Facilities**





## **10: Building Facilities**



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# BUILDINGS AND FACILITIES

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
APPROPRIATION							
-----							
Buildings and Facilities	\$5,228.1	\$5,000.0	\$5,000.0	-\$215.0	\$4,785.0	\$5,000.0	\$215.0
TOTAL, Buildings and Facilities	\$5,228.1	\$5,000.0	\$5,000.0	-\$215.0	\$4,785.0	\$5,000.0	\$215.0
OUTLAYS	\$3,872.3	\$5,195.0	\$5,449.5	-\$55.0	\$5,394.5	\$8,405.5	\$3,011.0
AUTHORIZATION LEVELS	Authorization is by virtue of the Appropriation Act.						

## BUILDINGS AND FACILITIES

### OVERVIEW AND STRATEGY

The Buildings and Facilities appropriation funds the design, construction, repair and improvement of buildings occupied by EPA. The Agency currently has ten Regional offices, three large research and development laboratories, several field stations with laboratory facilities and a large Headquarters complex.

This program provides a safe and healthful work environment for EPA employees by providing for maintenance, repair or replacement of our facilities. Major efforts are directed towards implementing intermediate and long-range plans which assess alternative housing options for EPA operations, as well as continuing a repair program that protects the investment in EPA's real property holdings. Resources are also used to upgrade and modify current facilities to more adequately and efficiently address Agency programs. Particular emphasis will continue to be placed on modifying current facilities in order to respond to the high level of activity in the hazardous waste program.

# BUILDINGS AND FACILITIES

## Building and Facilities

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
PROGRAM							
-----							
New Facilities							
Buildings & Facilities	\$1,634.4						
TOTAL	\$1,634.4						
Repairs & Improvements							
Buildings & Facilities	\$3,593.7	\$5,000.0	\$5,000.0	-\$215.0	\$4,785.0	\$5,000.0	\$215.0
TOTAL	\$3,593.7	\$5,000.0	\$5,000.0	-\$215.0	\$4,785.0	\$5,000.0	\$215.0
TOTAL:							
Buildings & Facilities	\$5,228.1	\$5,000.0	\$5,000.0	-\$215.0	\$4,785.0	\$5,000.0	\$215.0
Building & Facilities TOTAL	\$5,228.1	\$5,000.0	\$5,000.0	-\$215.0	\$4,785.0	\$5,000.0	\$215.0

## BUILDINGS AND FACILITIES

### Budget Request

The Agency requests a total of \$5,000,000 all of which will be for the Buildings and Facilities appropriation. This represents an increase of \$215,000 from 1986.

### Program Description

This program funds the design and construction of new EPA facilities, as well as necessary repairs and improvements to buildings already occupied by EPA. The Agency is currently upgrading its facilities by improving heating and ventilating systems, enlarging hazardous waste containment areas, improving fire detection systems, providing interior and exterior facility repairs, upgrading electrical systems, performing engineering and planning studies, and making emergency repairs. In addition, the Agency is currently designing a new radiation laboratory in Montgomery, Alabama, with construction planned for 1987.

This program contains the following two elements:

New Facilities -- This includes engineering and design services and building costs for the construction of new Federally owned facilities to be occupied by EPA and existing Federally owned and EPA occupied facilities.

Repairs and Improvements -- This covers major repairs and capital improvements to any buildings or facilities occupied by EPA. Most of the projects relate to the correction of health and safety deficiencies, the prevention of serious deterioration, and the modification of current facilities to meet program requirements.

### NEW FACILITIES

#### 1987 Program Request

The Agency is not requesting any funds for this activity in 1987.

#### 1986 Program

In 1986, the Agency is not allocating new funds for this activity. However, we are continuing our efforts to design a new radiation laboratory in Montgomery, Alabama, design a full containment facility in Cincinnati, Ohio, construct a wildlife toxicology facility in Corvallis, Oregon, and construct a pollution abatement facility at the Environmental Research Laboratory in Narragansett, Rhode Island. Also, we are continuing plans and designs for a replacement laboratory in Newport, Oregon.

#### 1985 Accomplishments

In 1985, the Agency obligated a total of \$1,634,400 for this program, all of which was from the Buildings and Facilities appropriation. These funds were used to begin constructing a wildlife toxicology facility for the Environmental Research Laboratory at Corvallis, Oregon, and a pollution abatement facility at the Environmental Research Laboratory in Narragansett, Rhode Island. The Agency also initiated the design of a full containment facility in Cincinnati, Ohio, and a new radiation laboratory in Montgomery, Alabama.

## REPAIRS AND IMPROVEMENTS

### 1987 Program Request

The Agency requests a total of \$5,000,000 for this program, all of which will be for the Buildings and Facilities appropriation. This represents an increase of \$215,000 from 1986. The increase will provide for increased costs for repairs and improvements in 1987. These funds will provide planning, engineering design, and construction related to the repair and improvement of buildings occupied by EPA. More specifically, these funds will be used to address critical repairs related to employee health and safety (fire protection installation); environmental compliance efforts in EPA facilities (asbestos removal and hazardous materials storage); and required alterations and repairs (electrical distribution, air conditioning, emergency power for animal facilities).

### 1986 Program

In 1986, the Agency is allocating a total of \$4,785,000 for this program, all of which is from the Buildings and Facilities appropriation. These resources are being utilized primarily to provide facilities maintenance and repair in an effort to prevent further deterioration of EPA facilities; to initiate environmental compliance activities such as asbestos and PCB removal; and to continue health and safety improvements and modifications to facilities reflecting shifts in program priorities and expanded space requirements.

### 1985 Accomplishments

In 1985, the Agency obligated a total of \$3,593,700, all of which was from the Buildings and Facilities appropriation. These resources were used to complete various health and safety improvements to protect EPA employees and provide routine and emergency repairs at multiple sites throughout the nation.



# **Construction Grants**



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# CONSTRUCTION GRANTS

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986
-----							
(DOLLARS IN THOUSANDS)							
Appropriation	\$2,400,000.0	\$2,400,000.0	\$600,000.0*	-\$25,800.0	\$574,200.0*	0**	-\$574,200.0
Obligations	\$2,573,964.9	\$2,500,000.0	\$1,400,000.0	-\$25,800.0	\$1,374,200.0	\$108,267.0	-\$1,265,933.0
Outlays	\$2,899,742.7	\$2,650,000.0	\$2,820,000.0	-\$258.0	\$2,819,742.0	\$2,355,200.0	-\$464,542.0
Authorization Levels	\$2,600,000.0*** Authorization for Construction Grants expired September 30, 1985, and is pending reauthorization.						

\* An additional \$1.8 billion has been appropriated pending reauthorization.

\*\* A Supplemental Appropriation request for \$1.8 billion will be proposed subsequent to reauthorization.

\*\*\* Authorization level includes \$200.0 million for Combined Sewer Overflow program.

## CONSTRUCTION GRANTS

### OVERVIEW AND STRATEGY

The Federal government has provided in excess of \$40 billion in grants for construction of wastewater treatment plants. The Administration has proposed to phase out the Federal grant program by 1990 and return responsibility for meeting future wastewater treatment construction needs to State and local governments. This transition of responsibility was initiated in 1977 and expanded in 1981 with amendments to the Clean Water Act (CWA) that encouraged delegation of the program to States and reduced Federal grant eligibilities.

Implementing the current CWA and the Administration's proposed legislation, the goals of the Construction Grants program continue to be to improve water quality and protect health, to reduce the discharge of municipal wastewater pollutants, and to ensure an effective transition of program management and financial responsibility from the Federal Government to State and local governments. To meet these goals, the program provides grants to municipal and intermunicipal agencies to assist in financing the construction of cost-effective and environmentally sound municipal wastewater treatment facilities to comply with requirements of the Clean Water Act. In addition the program provides funds to help delegated States manage the Construction Grants program and carry out water quality management planning programs. EPA works with the States to ensure that funds go to projects with the greatest water quality and public health impact. As of the end of 1985, 4319 projects remained active.

During 1985, EPA proposed legislative amendments addressing issues of the Federal role under a transitional program including Federal policy, management, oversight, and assistance to State programs. These legislative amendments propose Federal funding totalling \$6,000,000,000 through 1989 and, beginning in 1986, funding be limited to ongoing projects that had previously received Federal funds.

To assist the transition of responsibility, EPA is providing essential guidance to implement statutory and Agency requirements; providing training and technical assistance to State and EPA personnel to develop needed skills; helping maintain facilities compliance; and continuing to maintain essential oversight of State construction and operations and maintenance programs.

## CONSTRUCTION GRANTS

### Construction Grants

#### Budget Request

The Agency is not requesting funds for 1987 at this time. Subject to enactment of appropriate reform legislation, the Agency will submit an amended request for \$1,800,000,000 for the Municipal Construction Grants program. This request will represent an increase of \$1,225,800,000 over the \$574,200,000 currently available from 1986 appropriations.

#### Program Description

This program provides grants to municipal and intermunicipal agencies to assist in financing the construction of cost-effective and environmentally sound municipal wastewater treatment facilities and to assist delegated States in carrying out their responsibilities. Resources associated with the management of Construction Grants are described in the Municipal Source Control subactivity.

Statutory set-aside provisions of the Act have authorized States to reserve up to four percent of their authorization or \$400,000, whichever is greater, primarily to manage delegated activities. Clean Water Act Amendments proposed by EPA in 1985 would eliminate State set-asides for water quality management planning, innovative/Alternative technologies and rural communities. All grants for assisting in the construction of wastewater treatment facilities are to be awarded on the basis of a State's priority system, which is designed to ensure that funds are awarded to projects with the greatest potential for improving water quality.

The 1981 Amendments to the Clean Water Act increased non-Federal responsibility for financing construction from 25% to 45% for awards made beginning in 1985 while maintaining the share for already started phased or segmented projects at 25 percent. Grantees must demonstrate prior to award that the most economical alternative has been selected, including construction, operation, maintenance, and replacement costs. Value engineering review became mandatory for projects above \$10 million. Additionally, engineering firms must oversee a project's first year of operation to help ensure that it meets design and permit specifications. Other provisions designed to make projects more cost effective included eliminating funding to construct reserve capacity, limiting project eligibilities beginning in 1985, and providing for State discretion on certain funding eligibilities. EPA is working with all States to continue ensuring optimum delegation and effective State oversight.

#### CONSTRUCTION GRANTS

#### 1987 Program Request

No 1987 budget request is made at this time. However, once appropriate reform legislation is enacted, the Agency will submit an amended request totaling \$1,800,000,000. This represents an increase of \$1,225,800,000 over the \$574,200,000 currently available from the 1986 Continuing Resolution. Consistent with the need to honor previous funding commitments, the Administration continues to support passage of legislation to limit funding to ongoing projects that have already received Federal funding, i.e., no new starts.

### 1986 Program

The Agency is allocating a total of \$574,200,000 from the 1986 Continuing Resolution to fund both new projects and phased or segmented projects. Congress has also reserved \$1,800,000 to be made available in a future appropriations bill. The Agency estimates gross obligations of \$1,880,000,000, predominantly from previous years' authority, and net outlays of approximately \$2,820,000,000. A total of 148 step 3 and step 2 and 3 grant awards are being made resulting in 2,849 active construction projects at the end of 1986.

### 1985 Accomplishments

In 1985, net construction grants obligations totaled \$2,105,000,000, and supported 476 Step 3 and 2+3 grant awards. This funding resulted in 4319 active projects at the end of 1985. During the year, construction was completed on 833 projects. Federal outlays totaled \$2,899,742,700.





# **Superfund**



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SUPERFUND

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE DECREASE - 1987 VS 1986
----- (DOLLARS IN THOUSANDS) -----							
APPROPRIATION							
-----							
Hazardous Substances Response Trust Fund	\$480,405.2	\$900,000.0	\$900,000.0	-\$38,700.0	\$861,300.0	\$1,050,000.0	\$188,700.0
TOTAL, Superfund	\$480,405.2	\$900,000.0	\$900,000.0	-\$38,700.0	\$861,300.0	\$1,050,000.0	\$188,700.0
PERMANENT WORKYEARS	1,237.2	1,556.2	1,556.2		1,556.2	1,556.2	
TOTAL WORKYEARS	1,350.3	1,716.0	1,716.0		1,716.0	1,716.0	
OUTLAYS	\$360,311.6	\$670,000.0	\$480,000.0	-\$7,590.0	\$472,410.0	\$770,800.0	\$298,390.0
AUTHORIZATION LEVELS	Taxing authority, which is the major source of funding for this program expired on September 30, 1985. Funding for both 1986 and 1987 is contingent on reauthorization.						

SUPERFUND

Hazardous Substance Response Trust Fund

	ACTUAL 1985	BUDGET ESTIMATE 1986	ENACTED 1986	BALANCED BUDGET REDUCTION	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 VS 1986	
----- (DOLLARS IN THOUSANDS) -----								
PROGRAM -----								
Hazardous Substance Response Trust Fund								
Hazardous Substances	\$480,405.0	\$900,000.0	\$900,000.0	-\$38,700.0	\$861,300.0	\$1050,000.0	\$188,700.0	
TOTAL	\$480,405.0	\$900,000.0	\$900,000.0	-\$38,700.0	\$861,300.0	\$1050,000.0	\$188,700.0	
 TOTAL:								
Hazardous Substances	\$480,405.0	\$900,000.0	\$900,000.0	-\$38,700.0	\$861,300.0	\$1050,000.0	\$188,700.0	
Hazardous Substance Response Trust Fund	TOTAL	\$480,405.0	\$900,000.0	\$900,000.0	-\$38,700.0	\$861,300.0	\$1050,000.0	\$188,700.0
 PERMANENT WORKYEARS -----								
Hazardous Substance Response Trust Fund	1,237.2	1,556.2	1,556.2		1,556.2	1,556.2		
TOTAL PERMANENT WORKYEARS	1,237.2	1,556.2	1,556.2		1,556.2	1,556.2		
 TOTAL WORKYEARS -----								
Hazardous Substance Response Trust Fund	1,350.3	1,716.0	1,716.0		1,716.0	1,716.0		
TOTAL WORKYEARS	1,350.3	1,716.0	1,716.0		1,716.0	1,716.0		

## SUPERFUND

### OVERVIEW AND STRATEGY

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, commonly known as Superfund, charges the Agency with the responsibility for providing emergency response for hazardous substances released into the environment and the cleanup of inactive hazardous waste disposal sites. The major emphasis of the Superfund program will continue to be to stabilize imminent threats at hazardous waste sites and to implement the necessary long-term remedial response actions. The Hazardous Substance Response Trust Fund finances the required activities to implement CERCLA primarily through excise taxes levied on oil and chemical manufacturers. The authority to collect taxes expired on September 30, 1985.

The 1987 request is based on the Administration's reauthorization proposal and represents a continuing major investment in addressing the serious environmental and human health problems caused by hazardous substance releases and inactive hazardous waste disposal sites. The request provides \$1,050 million supported by 1,716 workyears to continue Superfund cleanup activities.

As authorized under CERCLA, the Agency will respond to releases of hazardous substances, pollutants, and contaminants by either a removal or remedial action or by compelling responsible parties to undertake the response action. Removal actions are generally short-term responses taken to abate an immediate threat posed by the uncontrolled release of hazardous substances at sites or spills into the air, land, or water. Remedial actions involve long-term and more permanent remedies taken instead of, or in addition to, removal actions. The program will continue to select sites for remedial action from the National Priorities List (NPL) and to undertake all response actions in accordance with the National Contingency Plan.

While the Agency has the primary responsibility for implementing the program, CERCLA and Executive Order 12316 provide a clear mandate for the Agency to work closely with a variety of other Federal agencies and the States to carry out the Act.

The Agency undertakes five major activities in implementing the Superfund program: Hazardous Substance Response, Interagency Support, Enforcement, Research and Development, and Management and Support. The effective integration of these activities involves close cooperation among various Agency offices, the States, and other Federal agencies with specific program responsibilities.

### CONTINGENCY PLAN

On September 30, 1985, the taxing authority of Superfund expired. In anticipation that reauthorization would not occur by October 1, 1985, the Agency developed a contingency plan to ensure that the Agency could maintain sufficient funding to continue operation of the Superfund program in 1986. On August 14, 1985, the Administrator implemented the Superfund Contingency Plan by stopping planned obligations for new remedial design and construction activities. Other remedial and all removal activities continued. This delayed work at 57 sites and was the primary reason the Agency was able to carry over approximately \$185 million for use in 1986. The available funding has increased by approximately \$20 million in 1986 through additional revenues gained from cost recovery, interest, and residual taxes.

The available funding is sufficient to maintain the Agency's workforce through 1986 and provide funding for six months of reduced program operations. The basic strategy underlying the Contingency Plan is that the earlier, less costly phases of long term cleanup and the contract and personnel infrastructure of the program should be supported to the maximum extent practicable so that program momentum can be restored quickly following reauthorization. Specifically, the plan calls for

1) maintaining the current workforce for the entire year to allow the program to work toward finishing ongoing site work and to ensure that no momentum is lost once reauthorization occurs; 2) ensuring adequate funding for emergency response actions; 3) continuing incremental funding for ongoing remedial site work; 4) pursuing an aggressive enforcement program so that long-term cleanup can be initiated by responsible parties; and 5) maintaining the necessary support contracts for analytical, technical, and program support.

Any work beyond this plan in 1986 is contingent upon additional funding being made available through a reauthorization of the taxing authority of Superfund.

#### Hazardous Substance Response

The Hazardous Substance Response program is responsible for protecting human health and the environment from the dangers associated with releases of hazardous substances into the environment by providing the necessary funding and support to undertake short-term emergency responses and long-term site cleanup. The activities include responding to spills and emergency releases of hazardous substances and conducting remedial work at abandoned and uncontrolled hazardous waste sites.

The Agency coordinates an emergency response program to deal with the most serious hazardous substance spills and site emergencies where the responsible party or State and local governments are unable to respond adequately. The Agency also conducts a comprehensive program to evaluate all known hazardous waste sites, to establish priorities for remedial response, and to undertake the appropriate remedy at as many sites as possible.

The emphasis in 1987 will be to restore program momentum and implement a balanced program to ensure that environmental threats posed by sites are addressed as quickly and effectively as possible. The funds requested, together with anticipated unobligated balances from 1986, will ensure that the Agency is able to commence remedial action at most sites where design work is completed prior to or during the year. The Agency will be implementing programmatic changes to speed up the remedial process and to improve both the management and technical performance of the remedial program. Also, the Agency will place an emphasis on selecting alternative technologies, when they are cost-effective, as part of on-site remedies. At least one alternative to land disposal will be evaluated as part of the remedy selection process at each site.

The request for 1987 will also ensure an adequate level of resources to support activities that complement direct response actions. The Agency's Environmental Response Team will continue to provide training and technical support to Agency, State, and local government personnel. Also, the Agency will continue to develop a system for collecting comprehensive national notification and response data on accidental releases of oil and hazardous substances. The program will establish mechanisms to facilitate the transfer of research and other technical information among decision-makers with emphasis on the transfer of information concerning alternative technologies to land disposal. Activities under the Chemical Emergency Preparedness Program (part of the Agency's Air Toxics strategy) will focus on providing training and technical assistance to States and priority areas. The Agency will also carry out simulations and exercises to evaluate contingency plans, preparedness, and response operations.

In 1986, emergency actions are being conducted under the contingency plan, which is in effect until the Superfund taxing authority is reauthorized. Actions are being taken in those situations where the Agency must respond to threats to human health or the environment. The Agency expects to assume a greater role in 1987 by expanding the definition of emergency response to include threats of releases. This should help to prevent actual releases of hazardous substances. Broader language contained in the revised National Contingency Plan will result in a greater number of National Priorities List (NPL) sites being targeted for emergency response actions. New remedial activities in 1986 have had to be severely curtailed under the Contingency Plan pending reauthorization.

The Agency responded to 196 hazardous spills and site emergencies in 1985, approximately equal to the 204 Agency response actions in 1984. Other accomplishments in 1985 under the Agency's long-term cleanup program include the completion of preliminary assessments at 5,137 sites and more detailed site assessments at 1,616 sites. In addition, the Agency initiated Fund-financed remedial investigations/feasibility studies (RI/FS) at 115 sites, Fund-financed remedial designs (RD) at 16 sites, and Fund-financed remedial actions (RA) at 5 sites.

#### Hazardous Substance Response - Interagency

CERCLA requires the Federal government to implement a coordinated program to respond to spills of hazardous substances and abandoned or uncontrolled waste sites containing hazardous substances. To this end, the following agencies provide support to EPA: Department of Health and Human Services, Department of Justice, Department of Transportation, Department of Commerce, Federal Emergency Management Agency, Department of Labor, and Department of Interior.

Executive Order 12316, signed by the President in August 1981, requires EPA to manage an interagency budget process which culminates in a consolidated budget for all the agencies that support the Superfund program. The activities of other Federal agencies are divided into two basic categories. The first category includes those activities which are episodic in nature and taken in direct support of specific site or spill response actions. With the exception of the Federal Emergency Management Agency, these actions are financed on a reimbursable basis from the funds appropriated to the Hazardous Spill and Site Response program. The second category of other Federal agency involvement is support for on-going activities which are generally not incident-specific. These activities include developing program policies and guidance, conducting health research, training response personnel, litigating civil and criminal cases, and providing scientific and technical advice to EPA on-scene coordinators. All funds are provided through transfer allocation accounts with the exception of the United States Coast Guard (USCG). Funds are transferred to the USCG on a reimbursable basis.

In 1987, other Federal agencies will resume the full scope of ongoing activities consistent with the direction in the Executive order. As part of the Superfund Contingency Plan, other Federal agencies participating in the Superfund program are limiting their 1986 activities to those determined to be essential and consistent with the Agency's. New projects proposed in 1986 are being deferred until new authorizing legislation is signed. Major interagency activities in 1985 included: conducting on-going health related studies, litigating civil and cost recovery cases, operating the National Response Center, ensuring worker health and safety, and providing relocation assistance and training.

#### Hazardous Substance Response - Enforcement

The Hazardous Substance Response Enforcement program protects human health and the environment by securing privately-financed response to actual or threatened releases of hazardous substances. The program pursues privately-financed response for the cleanup of hazardous waste sites and for the recovery of funds spent on Federal response actions.

To accomplish its mission, the enforcement program provides legal and technical support for negotiations for privately-financed response; develops and executes CERCLA Section 106 orders to compel responsible party response; and initiates civil, criminal, and CERCLA Section 107 cost recovery cases for referral to the Department of Justice (DOJ). The program also provides technical and legal support for ongoing cases filed by DOJ on behalf of the Agency and reviews and comments on State Lead enforcement actions. The National Enforcement Investigations Center (NEIC) provides specialized technical support for cases filed under CERCLA and provides evidence audit and case management support for major Superfund actions.

In 1987, the Agency will continue to focus its enforcement efforts on those sites included on the NPL where administrative actions are most likely to result



in privately-financed response actions. This will be achieved through negotiation, issuance of administrative orders, and, where necessary, judicial action. The Regions will continue devoting effort to the ground water protection strategy where it involves CERCLA issues. Resources will also be devoted to additional civil referrals and expected increases in remedial actions as RI/FS are completed on CERCLA sites. Headquarters will develop guidance specifically targeted to 1) expeditious resolution of CERCLA Section 106 cases; 2) further delegations of settlement authority for cost recoveries and certain CERCLA Section 106 cases; 3) expanded use of alternatives to litigation; 4) revisions to insurance and bankruptcy guidances; 5) integration of the enforcement of the RCRA and CERCLA programs; and 6) revised CERCLA Section 106 Administrative Order guidance.

Although the Hazardous Substance Response portion of the Superfund program has been slowed pending reauthorization, the enforcement program continues aggressively to seek privately-financed response and to recover monies spent by the Trust Fund. In addition to continuing oversight of RP response actions commenced in previous years, in 1986, the Agency will achieve RP agreements to start approximately 49 removals, 50 RI/FS, and 50 remedial designs by administrative and judicial means. Moreover, there will be an increased effort to resolve swiftly the ongoing case docket as a result of 1985 CERCLA initiatives in RI/FS and the increase in civil judicial referrals.

The value of the enforcement program is demonstrated by the fact that during 1985, Responsible Parties at 102 sites responded to enforcement actions and have agreed to conduct cleanup activities with an estimated value of \$126 million. This brings the total estimated value of cleanup actions achieved through enforcement procedures from the program's inception to \$481 million. In addition to compelling RPs to conduct cleanup activities, the program seeks recovery of Trust Fund expenditures for Federally-financed response actions. During 1985, of the 55 cases developed, 32 cost recovery cases were referred to the DOJ seeking \$27 million. In addition to these new cases referred to DOJ, the Agency achieved \$22 million in settlements from cases referred to DOJ this year and in prior years. The total cost recovery settlements to date are over \$25 million.

The following guidance was also developed in 1985: 1) CERCLA settlement policy; 2) EPA/State Relationships in Enforcement Actions for Sites on the National Priorities List; 3) procedures for issuing Notice Letters; 4) a model CERCLA Section 106 Consent Order for an RI/FS; 5) preparation of decision documents for approving Fund-financed and Potential Responsible Party (PRP) remedial actions under CERCLA; 6) cost recovery procedures manual; 7) procedures for planning and implementing off-site response actions; and 8) RI and FS guidance.

#### Hazardous Substance Research

The Research and Development program supports the Agency, States, and industry in resolving technical problems that inhibit implementation of removal and remedial actions. Support focuses on adapting existing technologies, procedures, and scientific information for application to uncontrolled sites. This support includes providing tailored guidance documents, operations manuals, risk and site assessment techniques, and direct technical assistance to implementing personnel at all levels. The specific objectives of the program are providing techniques and procedures for site and situation assessment; evaluating technologies for managing uncontrolled sites; developing procedures for ensuring effective assessment of sites which have been cleaned up; evaluating personnel health, protective equipment, and procedures; developing reportable quantities information; providing technical support for enforcement, program, and Regional offices; and, providing quality assurance support.

As the Research and Development program resumes its momentum in 1987, it will provide the guidance documents, operations manuals, assessment techniques, and technical expertise needed to meet the requirements of the Superfund program. As a result of the nature of Research and Development's support of the Superfund program, the Superfund Contingency Plan's reduction in the level of response activity has produced a corresponding and proportionate reduction in the level and

nature of research and development support. In 1985, the program's accomplishments included 1) a ground and surface water modeling user's guide; 2) risk assessment support for the enforcement program for 15 states; 3) provision of 58 Health Effects Assessment documents; 4) development of 90 chronic toxicity components for reportable quantity documents; and 5) a summary of the Quality Assurance provided to the National contract laboratory program.

#### Hazardous Substance Management And Support

This function provides the full array of financial, administrative, and support services necessary to manage and implement the Superfund program. This includes financial management to track and report on the use of the Hazardous Substance Response Trust Fund; administrative management for contract, personnel, information systems, office and laboratory services, and safety training; services to cover the costs of space, utilities, and other non-personnel support needs; and computer services to fund data processing costs. Management and support also includes the support of legal services; auditing services; policy analysis and program evaluation; budget development and oversight; and lab support for Superfund research.

In 1987, management and support will be expected to support fully the increasing Superfund program. In particular, this includes expanded contract capability as extramural dollars increase and additional support of Superfund cost recovery actions as additional Fund-financed actions are completed.

In 1986, under the Contingency Plan, all attempts have been made to maintain the program's personnel and contractual infrastructure. Services have not yet been reduced in 1986. This should assist the program to regain quickly its momentum following reauthorization. Accomplishments in 1985 include improving and maintaining detailed site specific transaction records; recruiting specialized personnel nationwide; providing cost documentation to support cost recovery litigation; maintaining sophisticated ADP systems to track hazardous waste site funding and oversight of Agency compliance with unique Trust Fund requirements; and completing Superfund audits of EPA contractors and assistance recipients, and internal and management audits of Superfund activities.

# **Special Analyses**



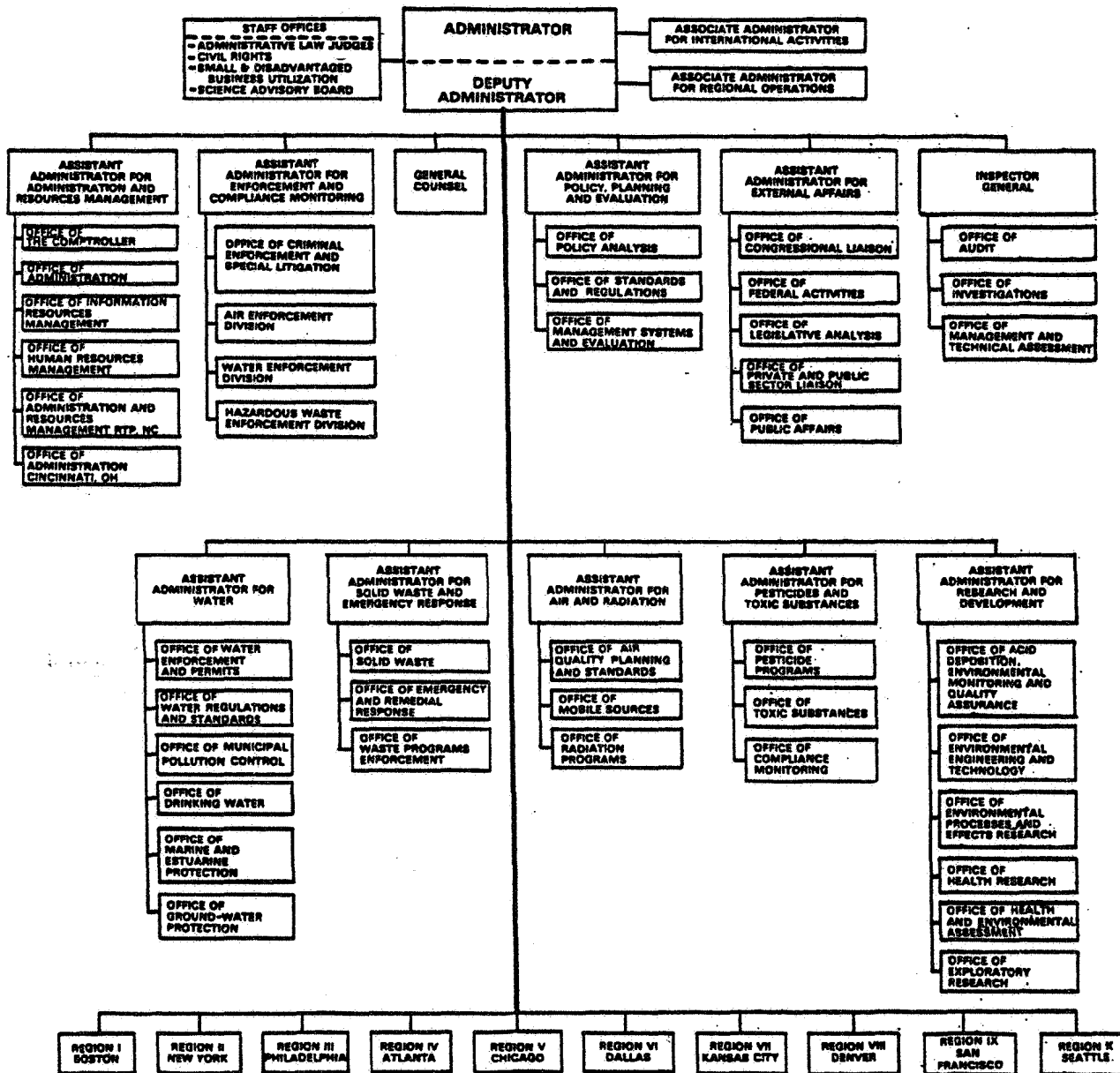
ENVIRONMENTAL PROTECTION AGENCY

SPECIAL ANALYSES

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# U.S. ENVIRONMENTAL PROTECTION AGENCY



ENVIRONMENTAL PROTECTION AGENCY

REGIONS  
Locations and States

Region I    Headquarters, Boston, Massachusetts  
Connecticut, Maine, Massachusetts,  
New Hampshire, Rhode Island, Vermont

Region II   Headquarters, New York, New York  
New Jersey, New York, Puerto Rico  
Virgin Islands

Region III   Headquarters, Philadelphia, Pennsylvania  
Delaware, District of Columbia, Maryland,  
Pennsylvania, Virginia, West Virginia

Region IV   Headquarters, Atlanta, Georgia  
Alabama, Florida, Georgia, Kentucky,  
Mississippi, North Carolina, South  
Carolina, Tennessee

Region V    Headquarters, Chicago, Illinois  
Illinois, Indiana, Michigan  
Minnesota, Ohio, Wisconsin

Region VI   Headquarters, Dallas, Texas  
Arkansas, Louisiana, New Mexico  
Oklahoma, Texas

Region VII   Headquarters, Kansas City, Kansas  
Iowa, Kansas, Missouri, Nebraska

Region VIII   Headquarters, Denver, Colorado  
Colorado, Montana, North Dakota,  
South Dakota, Utah, Wyoming

Region IX   Headquarters, San Francisco, California  
Arizona, California, Hawaii, Nevada,  
American Samoa, Guam, Trust Territories  
of Pacific Islands, Northern Mariana  
Islands

Region X    Headquarters, Seattle, Washington  
Alaska, Idaho, Oregon, Washington

## ENVIRONMENTAL PROTECTION AGENCY

Summary of Resources  
By Appropriation  
(dollars in thousands)

	Actual 1985	Budget Estimate 1986	Enacted 1986	Balanced Budget Reduction 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
<u>Research and Development</u>							
Budget Authority.....	\$188,875.0	\$212,400.0	\$223,400.0	-\$9,607.0	\$213,793.0	\$192,734.0	-\$21,059.0
Obligations.....	192,278.4	212,061.0	223,100.0 1/	-9,607.0	213,493.0	193,344.2	-20,148.8
Outlays.....	160,780.5	193,678.0	198,258.8	-2,677.0	195,581.8	204,026.9	+8,445.1
<u>Abatement, Control and Compliance</u>							
Budget Authority.....	480,500.0	495,500.0	577,600.0	-24,837.0	552,763.0	490,785.0	-61,978.0
Obligations.....	517,985.3	505,911.0	585,784.0 1/	-24,837.0	560,947.0	492,699.9	-68,247.1
Outlays.....	441,133.2	488,844.0	532,512.7	-11,272.0	521,240.7	532,473.7	+11,233.0
<u>Salaries and Expenses</u>							
Budget Authority.....	665,698.1	670,416.0	684,176.0	-29,420.0	654,756.0	687,947.0	+33,191.0
Obligations.....	658,985.6	670,416.0	684,031.0 1/	-29,420.0	654,611.0	687,947.0	+33,336.0
Outlays.....	631,419.0	660,901.2	675,498.4	-25,188.0	650,310.4	675,535.6	+25,225.2
Permanent Workyears.....	9,904.8	10,227.7	10,595.1	...	10,595.1	10,452.9	-142.2
Total Workyears.....	11,001.4	11,302.7	11,582.7	...	11,582.7	11,382.7	-200.0
<u>Buildings and Facilities</u>							
Budget Authority.....	12,500.0	5,000.0	5,000.0	-215.0	4,785.0	5,000.0	+215.0
Obligations.....	5,228.1	10,190.0	5,148.0	-215.0	4,933.0	7,600.0	+2,667.0
Outlays.....	3,872.3	5,195.0	5,449.5	-55.0	5,394.5	8,405.5	+3,011.0
<u>Operations, Research and Facilities</u>							
Obligations.....	151.4	300.0	300.0	...	300.0	300.0	...
Outlays.....	298.7	280.0	500.0	...	500.0	500.0	...
<u>SUBTOTAL, OPERATING PROGRAMS</u>							
Budget Authority.....	\$1,347,573.1	\$1,383,316.0	\$1,490,176.0	-\$64,079.0	\$1,426,097.0	\$1,376,466.0	-\$49,631.0
Obligations.....	\$1,374,628.8	\$1,398,878.0	\$1,498,363.0 1/	-\$64,079.0	\$1,434,284.0	\$1,381,891.1	-\$52,392.9
Outlays.....	\$1,237,503.7	\$1,348,898.2	\$1,412,219.4	-\$39,192.0	\$1,373,027.4	\$1,420,941.7	+\$47,914.3
Permanent Workyears.....	9,904.8	10,227.7	10,595.1	...	10,595.1	10,452.9	-142.2
Total Workyears.....	11,001.4	11,302.7	11,582.7	...	11,582.7	11,382.7	-200.0



	Actual 1985	Budget Estimate 1986	Enacted 1986	Balanced Budget Reduction 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
<b>Hazardous Substance Response</b>							
<b>Trust Fund</b>							
Budget Authority.....	620,000.0 <u>2/</u>	900,000.0	900,000.0	-38,700.0	861,300.0	1,050,000.0	+188,700.0
Obligations.....	480,405.2	900,000.0	882,000.0 <u>1/</u>	-38,700.0	843,300.0	1,252,000.0	+408,700.0
Outlays.....	360,311.6	670,000.0	480,000.0	-7,590.0	472,410.0	770,800.0	+298,390.0
Permanent Workyears.....	1,237.2	1,556.2	1,556.2	...	1,556.2	1,556.2	...
Total Workyears.....	1,350.3	1,716.0	1,716.0	...	1,716.0	1,716.0	...
<b>Payment to Hazardous Substance Response Trust Fund</b>							
Budget Authority.....	(44,000.0)	...	...	...	...	...	...
Obligations.....	(44,000.0)	...	...	...	...	...	...
Outlays.....	(44,000.0)	...	...	...	...	...	...
<b>Advances to Hazardous Substance Response Trust Fund</b>							
Budget Authority.....	...	...	...	...	(330,888.0)	(33,000.0)	(-297,888.0)
Obligations.....	...	...	...	...	(330,888.0)	(33,000.0)	(-297,888.0)
Outlays.....	...	...	...	...	(330,888.0)	(33,000.0)	(-297,888.0)
<b>Construction Grants</b>							
Budget Authority.....	2,400,000.0	2,400,000.0	600,000.0	-25,800.0	574,200.0 <u>3/</u>	... <u>4/</u>	-574,200.0
Obligations.....	2,573,964.9	2,500,000.0	1,400,000.0	-25,800.0	1,374,200.0	108,267.0	-1,265,933.0
Outlays.....	2,899,742.7	2,650,000.0	2,820,000.0	-258.0	2,819,742.0	2,355,200.0	-464,542.0
<b>Scientific Activities Overseas</b>							
Obligations.....	299.4	15.0	10.0	...	10.0	150.0	+140.0
Outlays.....	62.3	100.0	268.0	...	268.0	342.0	+74.0
<b>Revolving Fund</b>							
Obligations.....	533.0	600.0	600.0	-28.0	572.0	750.0	+178.0
Outlays.....	-117.0	15.0	-50.0	-28.0	-78.0	-1,250.0	-1,172.0
<b>Misc. Contributed Funds</b>							
Obligations.....	36.4	30.0	50.0	...	50.0	40.0	-10.0
Outlays.....	8.2	25.0	25.0	...	25.0	25.0	...

	Actual 1985	Budget Estimate 1986	Enacted 1986	Balanced Budget Reduction 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
<u>Reimbursements - Salaries and Expenses</u>							
Obligations.....	17,789.1	20,000.0	20,000.0	-34.0	19,966.0	20,000.0	+34.0
Permanent Workyears.....	56.8	53.0	53.0	...	53.0	53.0	...
Total Workyears.....	63.6	62.0	62.0	...	62.0	62.0	...
<u>Reimbursements - Superfund</u>							
Obligations.....	5,584.1	7,000.0	18,000.0	-398.0	17,602.0	30,000.0	+12,398.0
<u>TOTAL ENVIRONMENTAL PROTECTION</u>							
<u>AGENCY</u>							
Budget Authority.....	\$4,367,573.1	\$4,683,316.0	\$2,990,176.0	-\$128,579.0	\$2,861,597.0	\$2,426,466.0	-\$435,131.0
Obligations.....	\$4,453,240.9	\$4,826,523.0	\$3,819,022.0	-\$129,039.0	\$3,689,984.0	\$2,793,098.1	-\$896,885.9
Outlays.....	\$4,497,511.5	\$4,669,038.2	\$4,712,462.4	-\$47,068.0	\$4,665,394.4	\$4,546,058.7	-\$119,335.7
Permanent Workyears.....	11,198.8	11,836.9	12,204.3	...	12,204.3	12,062.1	-142.2
Total Workyears.....	12,415.3	13,080.7	13,360.7	...	13,360.7	13,160.7	-200.0

- 1/ Obligations for these appropriations reflect the reduction to Consulting Services pursuant to P.L. 99-160: Salaries and Expenses - \$145.0; Research and Development - \$133.0; Abatement, Control and Compliance - \$710.0. The reduction for Superfund of \$240.0 was considered in the estimates for that program.
- 2/ The 1985 appropriation does not reflect a receipt shortfall of \$13,918.0, which could reduce budget authority to \$606,082.0.
- 3/ An additional \$1.8 billion has been appropriated pending reauthorization.
- 4/ An amended budget request for \$1.8 billion will be submitted immediately after appropriate reform legislation is enacted.

# ENVIRONMENTAL PROTECTION AGENCY

## Summary of Resources By Media (dollars in thousands)

	Actual 1985	Budget Estimate 1986	Enacted 1986	Balanced Budget Reduction 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
<u>Air</u>							
Budget Authority.....	\$234,580.1	\$238,511.9	\$259,548.4	-\$11,160.5	\$248,387.9	\$239,228.4	-\$9,159.5
Obligations.....	232,624.2	240,879.6	257,426.0	-11,160.5	246,265.5	239,549.0	-6,716.5
Outlays.....	233,082.6	255,665.9	229,613.7	-6,624.9	222,988.8	235,868.6	+12,879.8
Permanent Workyears.....	1,583.2	1,604.0	1,713.9	...	1,713.9	1,660.2	-53.7
Total Workyears.....	1,710.0	1,751.6	1,830.6	...	1,830.6	1,791.1	-39.5
<u>Water Quality</u>							
Budget Authority.....	251,717.3	241,686.2	256,580.4	-11,033.3	245,547.1	217,841.0	-27,706.1
Obligations.....	249,909.9	244,426.5	258,852.0	-11,033.3	247,818.7	218,584.0	-29,234.7
Outlays.....	240,952.3	241,236.4	246,907.3	-6,595.9	240,311.4	235,732.7	-4,578.7
Permanent Workyears.....	1,957.0	2,003.3	2,056.5	...	2,056.5	2,021.1	-35.4
Total Workyears.....	2,191.5	2,248.6	2,283.0	...	2,283.0	2,181.8	-101.2
<u>Drinking Water</u>							
Budget Authority.....	85,992.1	88,125.8	91,230.4	-3,923.2	87,307.2	84,126.5	-3,180.7
Obligations.....	85,244.9	89,040.4	90,144.0	-3,923.2	86,220.8	84,242.0	-1,978.8
Outlays.....	86,081.7	98,286.3	87,423.1	-2,356.7	85,066.4	83,434.7	-1,631.7
Permanent Workyears.....	543.4	584.5	595.8	...	595.8	587.8	-8.0
Total Workyears.....	604.3	642.3	639.8	...	639.8	639.8	...
<u>Hazardous Waste</u>							
Budget Authority.....	191,912.1	237,353.8	248,544.4	-10,686.8	237,857.6	256,236.2	+18,378.6
Obligations.....	194,075.6	240,244.7	248,758.0	-10,686.8	238,071.2	256,144.0	+18,072.8
Outlays.....	150,793.3	197,408.7	214,677.5	-5,595.5	209,082.0	239,991.5	+30,909.5
Permanent Workyears.....	1,045.2	1,217.9	1,284.5	...	1,284.5	1,301.3	+16.8
Total Workyears.....	1,176.2	1,367.9	1,442.5	...	1,442.5	1,462.3	+19.8
<u>Pesticides</u>							
Budget Authority.....	66,928.4	70,506.9	69,836.5	-3,002.9	66,833.6	69,433.1	+2,599.5
Obligations.....	70,521.5	71,031.4	70,969.0	-3,002.9	67,966.1	69,467.0	+1,500.9
Outlays.....	61,155.0	57,560.2	67,142.7	-1,947.5	65,195.2	68,720.5	+3,525.3
Permanent Workyears.....	734.6	735.1	741.2	...	741.2	734.7	-6.5
Total Workyears.....	797.5	809.1	807.6	...	807.6	803.8	-3.8

	Actual 1985	Budget Estimate 1986	Enacted 1986	Balanced Budget Reduction 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
<u>Radiation</u>							
Budget Authority.....	13,003.4	9,782.4	10,202.1	-438.6	9,763.5	11,972.0	+2,208.5
Obligations.....	12,354.5	9,828.5	12,707.0	-438.6	12,268.4	11,989.0	-279.4
Outlays.....	16,068.9	9,758.4	12,723.5	-325.6	12,397.9	12,136.4	-261.5
Permanent Workyears.....	149.1	141.3	155.3	...	155.3	152.0	-3.3
Total Workyears.....	161.4	147.3	160.0	...	160.0	157.0	-3.0
<u>Noise</u>							
Budget Authority.....	...	...	...	...	...	...	...
Obligations.....	...	...	...	...	...	...	...
Outlays.....	45.9	469.7	395.9	...	395.9	184.7	-211.2
<u>Interdisciplinary</u>							
Budget Authority.....	56,264.1	47,166.3	56,272.8	-2,419.6	53,853.2	47,874.9	-5,978.3
Obligations.....	55,489.9	47,292.6	55,770.0	-2,419.6	53,350.4	48,043.0	-5,307.4
Outlays.....	54,857.8	48,252.6	60,916.3	-1,343.6	59,572.7	52,466.7	-7,106.0
Permanent Workyears.....	482.5	491.0	537.7	...	537.7	544.3	+6.6
Total Workyears.....	533.0	521.5	568.2	...	568.2	570.0	+1.8
<u>Toxic Substances</u>							
Budget Authority.....	84,536.2	94,952.1	143,331.3	-6,163.1	137,168.2	89,327.7	-47,840.5
Obligations.....	124,604.6	95,511.7	149,397.0	-6,163.1	143,233.9	90,523.0	-52,710.9
Outlays.....	84,562.6	94,151.1	125,687.4	-2,911.3	122,776.1	128,594.4	+5,818.3
Permanent Workyears.....	767.3	796.6	804.8	...	804.8	792.5	-12.3
Total Workyears.....	852.2	856.3	865.0	...	865.0	858.2	-6.8
<u>Energy</u>							
Budget Authority.....	58,592.2	67,317.3	61,707.7	-2,654.3	59,053.4	59,589.4	+536.0
Obligations.....	56,812.5	67,219.5	61,957.0	-2,654.3	59,302.7	59,613.0	+310.3
Outlays.....	41,692.6	58,659.6	62,301.4	-857.3	61,444.1	61,349.2	-94.9
Permanent Workyears.....	94.1	89.2	88.4	...	88.4	77.2	-11.2
Total Workyears.....	105.7	97.7	97.0	...	97.0	85.8	-11.2
<u>Management and Support</u>							
Budget Authority.....	291,547.2	282,913.3	287,922.0	-12,381.7	275,540.3	295,836.8	+20,296.5
Obligations.....	287,763.1	283,513.1	288,223.0	-12,381.7	275,841.3	296,137.1	+20,295.8
Outlays.....	264,338.7	282,254.3	298,981.1	-10,578.7	288,402.4	294,056.0	+5,622.2
Permanent Workyears.....	2,548.4	2,564.8	2,617.0	...	2,617.0	2,581.8	-35.2
Total Workyears.....	2,869.6	2,860.4	2,889.0	...	2,889.0	2,832.9	-56.1

	Actual 1985	Budget Estimate 1986	Enacted 1986	Balanced Budget Reduction 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
<b>Buildings and Facilities</b>							
Budget Authority.....	12,500.0	5,000.0	5,000.0	-215.0	4,785.0	5,000.0	+215.0
Obligations.....	5,228.1	10,190.0	5,148.0	-215.0	4,933.0	7,600.0	+2,667.0
Outlays.....	3,872.3	5,195.0	5,449.5	-55.0	5,394.5	8,405.5	+3,011.0
<b>SUBTOTAL, OPERATING PROGRAMS</b>							
Budget Authority.....	\$1,347,573.1	\$1,383,316.0	\$1,490,176.0	-\$64,079.0	\$1,426,097.0	\$1,376,466.0	-\$49,631.0
Obligations.....	\$1,374,628.8	\$1,398,878.0	\$1,499,351.0	-\$64,079.0	\$1,435,272.0	\$1,381,891.1	-\$53,380.9
Outlays.....	\$1,237,503.7	\$1,348,898.2	\$1,412,219.4	-\$39,192.0	\$1,373,027.4	\$1,420,941.7	+\$47,914.3
Permanent Workyears.....	9,904.8	10,227.7	10,595.1	...	10,595.1	10,452.9	-142.2
Total Workyears.....	11,001.4	11,302.7	11,582.7	...	11,582.7	11,382.7	-200.0
<b>Hazardous Substance Response</b>							
<b>Trust Fund</b>							
Budget Authority.....	620,000.0 1/	900,000.0	900,000.0	-38,700.0	861,300.0	1,050,000.0	+188,700.0
Obligations.....	480,405.2	900,000.0	882,000.0	-38,700.0	843,300.0	1,252,000.0	+408,700.0
Outlays.....	360,311.6	670,000.0	480,000.0	-7,590.0	472,410.0	770,800.0	+298,390.0
Permanent Workyears.....	1,237.2	1,556.2	1,556.2	...	1,556.2	1,556.2	...
Total Workyears.....	1,350.3	1,716.0	1,716.0	...	1,716.0	1,716.0	...
<b>Payment to Hazardous Substance</b>							
<b>Response Trust Fund</b>							
Budget Authority.....	(44,000.0)	...	...	...	...	...	...
Obligations.....	(44,000.0)	...	...	...	...	...	...
Outlays.....	(44,000.0)	...	...	...	...	...	...
<b>Advances to Hazardous</b>							
<b>Substance Response Trust Fund</b>							
Budget Authority.....	...	...	...	...	(330,888.0)	(33,000.0)	(-297,888.0)
Obligations.....	...	...	...	...	(330,888.0)	(33,000.0)	(-297,888.0)
Outlays.....	...	...	...	...	(330,888.0)	(33,000.0)	(-297,888.0)
<b>Construction Grants</b>							
Budget Authority.....	2,400,000.0	2,400,000.0	600,000.0	-25,800.0	574,200.0 2/	... 3/	-574,200.0
Obligations.....	2,573,964.9	2,500,000.0	1,400,000.0	-25,800.0	1,374,200.0	108,267.0	-1,265,933.0
Outlays.....	2,899,742.7	2,650,000.0	2,820,000.0	-258.0	2,819,742.0	2,355,200.0	-464,542.0
<b>Scientific Activities Overseas</b>							
Obligations.....	299.4	15.0	10.0	...	10.0	150.0	+140.0
Outlays.....	62.3	100.0	268.0	...	268.0	342.0	+74.0

	Actual 1985	Budget Estimate 1986	Enacted 1986	Balanced Budget Reduction 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
<u>Revolving Fund</u>							
Obligations.....	533.0	600.0	600.0	-28.0	572.0	750.0	+178.0
Outlays.....	-117.0	15.0	-50.0	-28.0	-78.0	-1,250.0	-1,172.0
<u>Misc. Contributed Funds</u>							
Obligations.....	36.4	30.0	50.0	...	50.0	40.0	-10.0
Outlays.....	8.2	25.0	25.0	...	25.0	25.0	...
<u>Reimbursements - Salaries and Expenses</u>							
Obligations.....	17,789.1	20,000.0	20,000.0	-34.0	19,966.0	20,000.0	+34.0
Permanent Workyears.....	56.8	53.0	53.0	...	53.0	53.0	...
Total Workyears.....	63.6	62.0	62.0	...	62.0	62.0	...
<u>Reimbursements - Superfund</u>							
Obligations.....	5,584.1	7,000.0	18,000.0	-398.0	17,602.0	30,000.0	+12,398.0

TOTAL ENVIRONMENTAL PROTECTIONAGENCY

Budget Authority.....	\$4,367,573.1	\$4,683,316.0	\$2,990,176.0	-\$128,579.0	\$2,861,597.0	\$2,426,466.0	-\$435,131.0
Obligations.....	\$4,453,240.9	\$4,826,523.0	\$3,820,011.0	-\$129,039.0	\$3,690,972.0	\$2,793,098.1	-\$897,873.9
Outlays.....	\$4,497,511.5	\$4,669,038.2	\$4,712,462.4	-\$47,068.0	\$4,665,394.4	\$4,546,058.7	-\$119,335.7
Permanent Workyears.....	11,198.8	11,836.9	12,204.3	...	12,204.3	12,062.1	-\$142.2
Total Workyears.....	12,415.3	13,080.7	13,360.7	...	13,360.7	13,160.7	-\$200.0

## NOTE:

The 1986 obligation estimates for the operating programs do not reflect the reduction for consulting services pursuant to P.L. 99-160; Salaries and Expense - \$145.0; Research and Development - \$133.0; and Abatement, Control & Compliance - \$710.0. The reduction for Superfund of \$240.0 was considered in the estimates for that program.

1/ The 1985 appropriation does not reflect a receipt shortfall of \$13,918.0, which could reduce budget authority to \$606,082.0.

2/ An additional \$1.8 billion has been appropriated pending reauthorization.

3/ An amended budget request for \$1.8 billion will be submitted immediately after appropriate reform legislation is enacted.

ENVIRONMENTAL PROTECTION AGENCY

1986 Workyears and Budget Authority  
By Media and Appropriation  
(dollars in thousands)

	Salaries & Expenses		Abatement, Control & Compliance	Research & Development	Total	
	Total Workyears	Amount	Amount	Amount	Total Workyears	Amount
Air.....	1,830.6	\$83,145.2	\$120,895.9	\$44,346.8	1,830.6	\$248,387.9
Water Quality.....	2,283.0	95,517.0	138,427.1	11,603.0	2,283.0	245,547.1
Drinking Water.....	639.8	27,680.7	45,230.8	14,395.7	639.8	87,307.2
Hazardous Waste.....	1,442.5	60,593.4	139,092.5	38,171.7	1,442.5	237,857.6
Pesticides.....	807.6	35,908.9	24,358.7	6,566.0	807.6	66,833.6
Radiation.....	160.0	7,695.4	2,052.3	15.8	160.0	9,763.5
Interdisciplinary.....	568.2	25,620.0	7,425.4	20,807.8	568.2	53,853.2
Toxic Substances.....	865.0	38,145.8	75,280.3	23,742.1	865.0	137,168.2
Energy.....	97.0	4,909.3	...	54,144.1	97.0	59,053.4
Management and Support.....	2,889.0	275,540.3	...	...	2,889.0	275,540.3
Subtotal.....	11,582.7	\$654,756.0	\$552,763.0	\$213,793.0	11,582.7	\$1,421,312.0
Buildings and Facilities.....	...	...	...	...	...	4,785.0
Reimbursements.....	...	...	...	...	62.0	...
Hazardous Substance Response Trust Fund.....	...	...	...	...	1,716.0	861,300.0
Advances to the Hazardous Substance Response Trust Fund.....	...	...	...	...	...	(330,888.0)
Subtotal.....	11,582.7	\$654,756.0	\$552,763.0	\$213,793.0	13,360.7	\$2,287,397.0
Construction Grants.....	...	...	...	...	...	574,200.0
Total.....	11,582.7	\$654,756.0	\$552,763.0	\$213,793.0	13,360.7	\$2,861,597.0

ENVIRONMENTAL PROTECTION AGENCY

1987 Workyears and Budget Authority  
By Media and Appropriation  
(dollars in thousands)

	Salaries & Expenses		Abatement, Control & Compliance Amount	Research & Development Amount	Total	
	Total Workyears	Amount			Total Workyears	Amount
Air.....	1,791.1	\$84,208.4	\$117,828.0	\$37,192.0	1,791.1	\$239,228.4
Water Quality.....	2,181.8	95,712.1	114,628.9	7,500.0	2,181.8	217,841.0
Drinking Water.....	639.8	28,378.5	42,863.0	12,885.0	639.8	84,126.5
Hazardous Waste.....	1,462.3	66,175.2	153,692.0	36,369.0	1,462.3	256,236.2
Pesticides.....	803.8	37,766.1	23,953.1	7,713.9	803.8	69,433.1
Radiation.....	157.0	8,161.4	3,810.6	...	157.0	11,972.0
Interdisciplinary.....	570.0	27,225.2	5,133.7	15,516.0	570.0	47,874.9
Toxic Substances.....	858.2	38,996.9	28,875.7	21,455.1	858.2	89,327.7
Energy.....	85.8	5,486.4	...	54,103.0	85.8	59,589.4
Management and Support.....	2,832.9	295,836.8	...	...	2,832.9	295,836.8
Subtotal.....	11,382.7	\$687,947.0	\$490,785.0	\$192,734.0	11,382.7	\$1,371,466.0
Buildings and Facilities.....	...	...	...	...	...	5,000.0
Reimbursements.....	...	...	...	...	62.0	...
Hazardous Substance Response Trust Fund.....	...	...	...	...	1,716.0	1,050,000.0
Advances to the Hazardous Substance Response Trust Fund .....	...	...	...	...	...	(33,000.0)
Subtotal.....	11,382.7	\$687,947.0	\$490,785.0	\$192,734.0	13,160.7	\$2,426,466.0
Construction Grants.....	...	...	...	...	...	...
Total.....	11,382.7	\$687,947.0	\$490,785.0	\$192,734.0	13,160.7	\$2,426,466.0



ENVIRONMENTAL PROTECTION AGENCY

Summary of State Grant Resources  
(in thousands of dollars)

	ACTUAL 1985	CURRENT ESTIMATE 1986	ESTIMATE 1987	INCREASE + DECREASE - 1987 vs 1986
<u>AIR</u>	<u>\$90,486.0</u>	<u>\$95,732.5</u>	<u>\$95,000.0</u>	<u>-\$732.5</u>
Section 105.....	90,486.0	95,732.5	95,000.0	-732.5
<u>WATER QUALITY</u>	<u>61,313.4</u>	<u>66,894.3</u>	<u>52,100.0</u>	<u>-14,794.3</u>
Section 106.....	61,313.4	62,109.3	52,100.0	-10,009.3
Clean Lakes.....	...	4,785.0	...	-4,785.0
<u>DRINKING WATER</u>	<u>38,836.4</u>	<u>39,141.5</u>	<u>36,950.0</u>	<u>-2,191.5</u>
Public Water Systems				
Program Grants.....	28,424.3	28,183.7	28,450.0	+266.3
Underground Injection				
Control Program.....	8,312.1	8,708.9	8,500.0	-208.9
Special Studies & Demos.....	2,100.0	2,248.9	...	-2,248.9
<u>HAZARDOUS WASTE</u>	<u>56,711.7</u>	<u>66,750.7</u>	<u>73,000.0</u>	<u>+6,249.3</u>
Hazardous Waste Management..	46,663.2	55,506.0	63,000.0	+7,494.0
Hazardous Waste Initiative..	5,048.5	4,545.7	...	-4,545.7
Hazardous Waste Compliance..	5,000.0	...	...	...
Underground Storage Tanks...	...	6,699.0	10,000.0	+3,301.0
<u>PESTICIDES</u>	<u>12,300.8</u>	<u>11,774.5</u>	<u>11,203.4</u>	<u>-571.1</u>
Pesticides Enf. Grants.....	9,717.0	9,286.2	8,703.4	-582.8
Pesticides Cert. & Training.	2,583.8	2,488.3	2,500.0	+11.7
<u>TOXIC SUBSTANCES</u>	<u>1,500.0</u>	<u>2,201.1</u>	<u>2,200.0</u>	<u>-1.1</u>
Toxics Enf. Grants.....	1,500.0	2,201.1	2,200.0	-1.1
SUBTOTAL.....	\$261,148.3	\$282,494.6	\$270,453.4	-\$12,041.2
<u>CONSTRUCTION GRANTS.....</u>	<u>2,573,964.8</u>	<u>574,200.0</u>	<u>...</u>	<u>-574,200.0</u>
TOTAL.....	\$2,835,113.1	\$856,694.6	\$270,453.4	-\$586,241.2

ENVIRONMENTAL PROTECTION AGENCY

History of State Grant Budget Authority  
Part I: 1971 - 1976  
(in thousands of dollars)

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
<u>AIR</u>	<u>\$30,200</u>	<u>\$42,900</u>	<u>\$50,000</u>	<u>\$50,000</u>	<u>\$55,268</u>	<u>\$51,518</u>
Section 105	30,200	42,900	50,000	50,000	55,268	51,518
Section 175	...	...	...	...	...	...
<u>WATER QUALITY</u>	<u>10,000</u>	<u>15,000</u>	<u>70,000</u>	<u>150,000</u>	<u>199,625</u>	<u>112,375</u>
Section 106	10,000	15,000	20,000	50,000	45,625	44,375
Section 208	...	...	50,000 <sup>1/</sup>	100,000 <sup>1/</sup>	150,000 <sup>1/</sup>	53,000
Clean Lakes	...	...	...	...	4,000	15,000
<u>DRINKING WATER</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>10,000</u>
Public Water Systems	...	...	...	...	...	7,500
Underground Injection	...	...	...	...	...	2,500
Special Studies & Demos	...	...	...	...	...	...
<u>HAZARDOUS WASTE</u>	<u>1,629</u>	<u>2,545</u>	<u>3,250</u>	<u>...</u>	<u>...</u>	<u>1,800</u>
Haz. Waste Management	...	...	...	...	...	...
Solid Waste Management	1,629	2,545	3,250	...	...	1,800
Resource Recovery	...	...	...	...	...	...
Hazardous Waste Initiative	...	...	...	...	...	...
Hazardous Waste Compliance	...	...	...	...	...	...
Underground Storage Tanks	...	...	...	...	...	...
<u>PESTICIDES</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>
Pesticides Inf. Grants	...	...	...	...	...	...
Pesticides Cert. & Training	...	...	...	*	*	*
<u>TOXIC SUBSTANCES</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>
Toxic Inf. Grants	...	...	...	...	...	...
<b>TOTAL</b>	<b><u>\$41,829</u></b>	<b><u>\$60,445</u></b>	<b><u>\$123,250</u></b>	<b><u>\$200,000</u></b>	<b><u>\$254,893</u></b>	<b><u>\$175,693</u></b>

<sup>1/</sup> CONTRACT AUTHORITY

\* Pesticides certification and training data for these years is unavailable.

ENVIRONMENTAL PROTECTION AGENCY

History of State Grant Budget Authority  
Part II: 1977 - 1982  
(in thousands of dollars)

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
<u>AIR</u>	<u>\$55,550</u>	<u>\$66,135</u>	<u>\$130,025</u>	<u>\$82,800</u>	<u>\$87,673</u>	<u>\$87,735</u>
Section 105	55,550	66,135	80,025	82,800	87,673	87,735
Section 175	...	...	50,000	...	...	...
<u>WATER QUALITY</u>	<u>80,000</u>	<u>128,110</u>	<u>108,003</u>	<u>101,230</u>	<u>95,696</u>	<u>60,200</u>
Section 106	50,000	52,400	52,400	48,730	51,223	51,200
Section 208	15,000	59,509	41,028	37,500	33,473	...
Clean Lakes	15,000	16,201	14,575	15,000	11,000	9,000
<u>DRINKING WATER</u>	<u>20,000</u>	<u>27,110</u>	<u>36,270</u>	<u>34,745</u>	<u>37,598</u>	<u>37,848</u>
Public Water Systems	15,000	20,500	26,400	29,450	29,450	29,450
Underground Injection	5,000	6,000	7,600	4,395	6,648	6,575
Special Studies & Demos	...	610	2,270	900	1,500	1,823
<u>HAZARDOUS WASTE</u>	<u>2,925</u>	<u>14,304</u>	<u>44,886</u>	<u>38,600</u>	<u>38,570</u>	<u>41,700</u>
Haz. Waste Management	...	...	15,018	18,600	26,487	41,700
Solid Waste Management	2,925	14,304	15,150	10,000	8,083	...
Resource Recovery	...	...	14,718	10,000	4,000	...
Hazardous Waste Initiative	...	...	...	...	...	...
Hazardous Waste Compliance	...	...	...	...	...	...
Underground Storage Tanks	...	...	...	...	...	...
<u>PESTICIDES</u>	<u>1,000</u>	<u>7,280</u>	<u>13,052</u>	<u>12,393</u>	<u>10,972</u>	<u>11,202</u>
Pesticides Enf. Grants	1,000	5,000	9,538	8,750	8,020	8,632
Pesticides Cert. & Training	*	2,280	3,514	3,643	2,952	2,570
<u>TOXIC SUBSTANCES</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>1,000</u>	<u>500</u>
Toxic Enf. Grants	...	...	...	...	1,000	500
<u>TOTAL</u>	<u>\$159,475</u>	<u>\$242,939</u>	<u>\$332,236</u>	<u>\$269,768</u>	<u>\$271,509</u>	<u>\$239,185</u>

ENVIRONMENTAL PROTECTION AGENCY

History of State Grant Budget Authority

Part III: 1983 - 1987

(in thousands of dollars)

	1983	1984	1985	1986 Current Estimate	1987 Estimate
<u>AIR</u>	<u>\$85,050</u>	<u>\$87,684</u>	<u>\$90,937</u>	<u>\$95,733</u>	<u>\$95,000</u>
Section 105	85,050	87,684	90,937	95,733	95,000
Section 175	...	...	...	...	...
<u>WATER QUALITY</u>	<u>57,200</u>	<u>59,259</u>	<u>66,299</u>	<u>66,894</u>	<u>52,100</u>
Section 106	54,200	54,259	61,299	62,109	52,100
Section 208	...	...	...	...	...
Clean Lakes	3,000	5,000	5,000	4,785	...
<u>DRINKING WATER</u>	<u>36,425</u>	<u>36,850</u>	<u>39,050</u>	<u>39,142</u>	<u>36,950</u>
Public Water Systems	27,450	27,450	28,450	28,184	28,450
Underground Injection	7,075	7,500	8,500	8,709	8,500
Special Studies & Demos	1,900	1,900	2,100	2,249	...
<u>HAZARDOUS WASTE</u>	<u>44,068</u>	<u>46,850</u>	<u>57,145</u>	<u>66,751</u>	<u>73,000</u>
Haz. Waste Management	44,068	46,850	46,970	55,506	63,000
Solid Waste Management	...	...	...	...	...
Resource Recovery	...	...	...	...	...
Hazardous Waste Initiative	...	...	5,175	4,546	...
Hazardous Waste Compliance	...	...	5,000	...	...
Underground Storage Tanks	...	...	...	6,699	10,000
<u>PESTICIDES</u>	<u>10,718</u>	<u>10,860</u>	<u>12,321</u>	<u>11,774</u>	<u>11,203</u>
Pesticides Enf. Grants	8,718	8,703	9,717	9,286	8,703
Pesticides Cert. & Training	2,000	2,157	2,604	2,488	2,500
<u>TOXIC SUBSTANCES</u>	<u>...</u>	<u>500</u>	<u>1,500</u>	<u>2,201</u>	<u>2,200</u>
Toxic Enf. Grants	...	500	1,500	2,201	2,200
 TOTAL	 <u>\$233,461</u>	 <u>\$242,003</u>	 <u>\$267,252</u>	 <u>\$282,495</u>	 <u>\$270,453</u>

# ENVIRONMENTAL PROTECTION AGENCY

## Permanent Positions By Grade

### SALARIES AND EXPENSES

<u>Grades</u>	<u>Actual 1985</u>	<u>Current Estimate 1986</u>	<u>Estimate 1987</u>
Executive Level II.....	1	2	2
Executive Level III.....	1	2	2
Executive Level IV.....	6	7	7
Executive Level V.....	1	2	2
Subtotal.....	9	13	13
ES-6.....	4	4	4
ES-5.....	40	40	40
ES-4.....	83	83	83
ES-3.....	52	55	55
ES-2.....	26	27	27
ES-1.....	12	19	19
Subtotal.....	217	228	228
GS-16.....	10	10	10
GS/GI-15.....	580	583	580
GS/GI-14.....	1,203	1,213	1,213
GS/GI-13.....	1,788	1,800	1,790
GS-12.....	1,864	1,900	1,865
GS-11.....	968	992	970
GS-10.....	59	70	70
GS-9.....	732	750	750
GS-8.....	191	200	200
GS-7.....	855	900	855
GS-6.....	471	490	471
GS-5.....	647	675	667
GS-4.....	314	330	330
GS-3.....	101	110	110
GS-2.....	10	16	16
GS-1.....	...	...	...
Subtotal.....	9,793	10,039	9,897

<u>Grades</u>	<u>Actual 1985</u>	<u>Current Estimate 1986</u>	<u>Estimate 1987</u>
Positions established by act of July 1, 1974 (42 U.S.C. 207):			
Assistant Surgeon General, \$40,579 to \$68,700.....	...	...	...
Director grade, \$30,074 to \$51,955.....	70	70	70
Senior grade 05, \$24,055 to \$42,390.....	101	102	102
Full grade 04, \$20,275 to \$35,449.....	42	42	42
Assistant grade 03, \$18,842 to \$30,658.....	7	7	7
Subtotal.....	220	221	221
Positions established by act of November 16, 1977 (42 U.S.C. 201) compensation for which is not to exceed the maximum rate payable for a GS-18.....			
	17	19	19
<u>Ungraded.....</u>	<u>71</u>	<u>75</u>	<u>75</u>
TOTAL PERMANENT POSITIONS.....	10,327	10,595	10,453

ENVIRONMENTAL PROTECTION AGENCY

Permanent Positions By Grade

HAZARDOUS SUBSTANCES RESPONSE TRUST FUND

<u>Grades</u>	<u>Actual 1985</u>	<u>Current Estimate 1986</u>	<u>Estimate 1987</u>
ES-5.....	2	2	2
ES-4.....	3	3	3
ES-3.....	2	2	2
ES-2.....	4	4	4
ES-1.....	1	6	6
Subtotal.....	12	17	17
GS/GM-15.....	43	45	45
GS/GM-14.....	87	90	90
GS/GM-13.....	221	250	250
GS-12.....	294	325	325
GS-11.....	159	200	200
GS-10.....	1	10	10
GS-9.....	99	142	142
GS-8.....	7	20	20
GS-7.....	108	150	150
GS-6.....	42	75	75
GS-5.....	80	101	101
GS-4.....	50	75	75
GS-3.....	15	25	25
GS-2.....	2	12	12
GS-1.....	...	...	...
Subtotal.....	1,208	1,520	1,520

<u>Grades</u>	<u>Actual 1985</u>	<u>Current Estimate 1986</u>	<u>Estimate 1987</u>
Positions established by act of July 1, 1974 (42 U.S.C. 207):			
Assistant Surgeon General, \$40,579 to \$68,700.....	...	...	...
Director grade, \$30,074 to \$51,955.....	4	4	4
Senior grade 05, \$24,055 to \$42,390.....	6	5	5
Full grade 04, \$20,275 to \$35,449.....	5	5	5
Assistant grade 03, \$18,842 to \$30,658.....	2	2	2
Subtotal.....	17	16	16
Positions established by act of November 16, 1977 (42 U.S.C. 201) compensation for which is not to exceed the maximum rate payable for a GS-18.....	1	1	1
<u>Ungraded</u> .....	...	2	2
TOTAL PERMANENT POSITIONS.....	1,238	1,556	1,556



ENVIRONMENTAL PROTECTION AGENCY

Permanent Positions By Grade

REIMBURSABLES

(SALARIES AND EXPENSES)

<u>Grades</u>	<u>Actual 1985</u>	<u>Current Estimate 1986</u>	<u>Estimate 1987</u>
GS/GM-15.....	3	3	3
GS/GM-14.....	2	2	2
GS/GM-13.....	2	2	2
GS-12.....	5	5	5
GS-11.....	10	9	9
GS-10.....	4	4	4
GS-9.....	7	5	5
GS-8.....	1	1	1
GS-7.....	6	5	5
GS-6.....	2	2	2
GS-5.....	5	5	5
Subtotal.....	47	43	43
Positions established by act of July 1, 1974 (42 U.S.C. 207):			
Director grade 06, \$30,074 to \$51,955.....	5	6	6
Senior grade 05, \$24,055 to 42,390.....	3	3	3
Subtotal.....	8	9	9
<u>Ungraded.....</u>	<u>1</u>	<u>1</u>	<u>1</u>
TOTAL PERMANENT POSITIONS.....	56	53	53

## ENVIRONMENTAL PROTECTION AGENCY

Average Employment and Salary

<u>Appropriation/Pay Plan</u>	<u>1985 Actuals</u>	<u>1986 Current Estimate</u>	<u>1987 President's Budget</u>
<u>Salaries and Expenses</u>			
Average ES Salary	\$67,523	\$67,523	\$67,523
Average GS Grade	10.207	10.207	10.207
Average GS Salary	\$32,672	\$32,672	\$32,672
Average Salary of Ungraded Positions	\$45,892	\$45,892	\$45,892
<u>Revolving Fund</u>			
Average GS Grade	10.207	10.207	10.207
Average GS Salary	\$32,672	\$32,672	\$32,672
<u>Superfund</u>			
Average ES Salary	\$66,326	\$66,326	\$66,326
Average GS Grade	10.051	10.051	10.051
Average GS Salary	\$30,699	\$30,699	\$30,699
<u>Reimbursables</u>			
Average GS Grade	9.415	9.415	9.415
Average GS Salary	\$28,838	\$28,838	\$28,838
<u>TOTAL AVERAGE</u>			
Average ES Salary	\$67,460	\$67,460	\$67,460
Average GS Grade	10.187	10.187	10.187
Average GS Salary	\$32,444	\$32,444	\$32,444
Average Salary of Ungraded Positions	\$45,892	\$45,892	\$45,892

\* Average GS Salary of Ungraded positions includes AD, ED, EF, EH, EI, EX, and SES pay plans.

ENVIRONMENTAL PROTECTION AGENCY

Object Classification  
Includes Direct Obligations Only  
(in thousands of dollars).

RESEARCH AND DEVELOPMENT

OBJECT CLASSES	Actual 1985	Budget Estimate 1986	Enacted 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
22.0 Transportation of things.....	\$3.0	...	...	...	...	...
23.2 Rental payments to others.....	1.0	...	...	...	...	...
25.0 Other services.....	118,275.7	\$121,245.7	\$133,541.4	\$127,864.0	\$120,078.3	-\$7,785.7
26.0 Supplies and materials.....	29.0	...	...	...	...	...
31.0 Equipment.....	26.4	...	...	...	...	...
41.0 Grants, subsidies, and contributions.....	73,943.3	90,815.3	89,558.6	85,629.0	73,265.9	-12,363.1
Total obligations.....	\$192,278.4	\$212,061.0	\$223,100.0	\$213,493.0	\$193,344.2	-\$20,148.8

EXPLANATION OF INCREASES AND DECREASES TO OBJECT CLASSIFICATIONS

	Actual 1985	Budget Estimate 1986	Enacted 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
<u>Transportation of things.....</u>	\$3.0	...	...	...	...	...
There is no request in the 1987 estimate and no change in the 1986 estimate.						
<u>Rental payments to others.....</u>	\$1.0	...	...	...	...	...
There is no request in the 1987 estimate and no change in the 1986 estimate.						
<u>Other services.....</u>	\$118,275.7	\$121,245.7	\$133,541.4	\$127,864.0	\$120,078.3	
The decrease in the 1987 request reflects the government-wide commitment to deficit reduction.....						
						<u>-\$7,785.7</u>

	<u>Actual 1985</u>	<u>Budget Estimate 1986</u>	<u>Enacted 1986</u>	<u>Current Estimate 1986</u>	<u>Estimate 1987</u>	<u>Increase + Decrease - 1987 vs 1986</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$5,677.4</u>		
<u>Supplies and materials.....</u>	\$29.0	...	...	...	...	...
There is no request in 1987 and no change in the 1986 estimate.						
<u>Equipment.....</u>	\$26.4	...	...	...	...	...
There is no request in 1987 and no change in the 1986 estimate.						
<u>Grants, subsidies, and contributions.....</u>	\$73,943.3	\$90,815.3	\$89,558.6	\$85,629.0	\$73,265.9	
The decrease in the 1987 request reflects the government-wide commitment to deficit reduction.....						<u>-\$12,363.1</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$3,929.6</u>		

# ENVIRONMENTAL PROTECTION AGENCY

Object Classification  
Includes Direct Obligations Only  
(in thousands of dollars)

## ABATEMENT, CONTROL AND COMPLIANCE

OBJECT CLASSES	Actual 1985	Budget Estimate 1986	Enacted 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
21.0 Travel and transportation of persons.....	\$172.4	\$265.0	\$259.7	\$259.7	\$265.6	+\$5.9
22.0 Transportation of things.....	67.4	...	...	...	...	...
23.2 Communications, utilities and miscellaneous charges.....	86.2	...	...	...	...	...
24.0 Printing and reproduction.....	174.9	...	49.0	46.8	50.2	+3.4
25.0 Other services.....	173,204.7	195,941.1	224,051.1	214,713.4	207,391.8	-7,321.6
26.0 Supplies and materials.....	9.3	...	29.4	28.1	30.1	+2.0
31.0 Equipment.....	8.1	...	19.6	18.7	20.1	+1.4
41.0 Grants, subsidies, and contributions.....	341,717.3	309,704.5	361,375.2	345,880.3	284,942.1	-60,938.2
42.0 Insurance claims and indemnities.....	2,545.0	...	...	...	...	...
Total obligations.....	\$517,985.3	\$505,910.9	\$585,784.0	\$560,947.0	\$492,699.9	-\$68,247.1

### EXPLANATION OF INCREASES AND DECREASES TO OBJECT CLASSIFICATIONS

	Actual 1985	Budget Estimate 1986	Enacted 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
Travel and transportation of persons.....	\$172.4	\$265.0	\$259.7	\$259.7	\$265.6	

The increase in the 1987 request reflects  
travel in support of the Drinking Water UIC  
program in non-primacy states.....

+\$5.9

There is no change in the 1986 estimate.

	Actual 1985	Budget Estimate 1986	Enacted 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
<u>Transportation of things</u> .....	\$67.4	...	...	...	...	...
There is no request in the 1987 estimate and no change in the 1986 estimate.						
<u>Communications, utilities and miscellaneous charges</u> .....	\$86.2	...	...	...	...	...
There is no request in the 1987 estimate and no change in the 1986 estimate.						
<u>Printing and reproduction</u> .....	\$174.9	...	\$49.0	\$46.8	\$50.2	
The increase in the 1987 request reflects use of carryover funds for the Asbestos-in- schools program.....						<u>+\$3.4</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....						<u>-\$2.2</u>
<u>Other services</u> .....	\$173,204.7	\$195,941.1	\$224,051.1	\$214,713.4	\$207,391.8	
The decrease in other services in the 1987 request primarily reflects reduced contract levels as a result of the government-wide commitment to deficit reduction.....						<u>-\$7,321.6</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....						<u>-\$9,337.7</u>
<u>Supplies and materials</u> .....	\$9.3	...	\$29.4	\$28.1	\$30.1	
The increase in the 1987 request reflects use of carryover funds for the Asbestos-in- schools program.....						<u>+\$2.0</u>
The decrease in the 1986 current estimate from the enacted represents the reduction mandated by the Balanced Budget Act.....						<u>-\$1.3</u>

	Actual 1985	Budget Estimate 1986	Enacted 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
<u>Equipment</u> .....	\$8.1	...	\$19.6	\$18.7	\$20.1	
<p>The increase in the 1987 request reflects use of carryover funds for the Asbestos-in-schools program.....</p>						<u>+\$1.4</u>
<p>The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....</p>						<u>-\$0.9</u>
<u>Grants, subsidies, and contributions</u> .....	\$341,717.3	\$309,704.5	\$361,375.2	\$345,880.3	\$284,942.1	
<p>The decrease in the 1987 request reflects the government-wide commitment to deficit reduction.....</p>						<u>-\$60,938.2</u>
<p>The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....</p>						<u>-\$15,494.9</u>
<u>Insurance claims and idemnities</u> .....	\$2,545.0	...	...	...	...	...
<p>There is no request in the 1987 estimate and no change in the 1986 estimate.</p>						

ENVIRONMENTAL PROTECTION AGENCY

Object Classification  
Includes Direct Obligations Only  
(in thousands of dollars)

SALARIES AND EXPENSES

<u>OBJECT CLASSES</u>	<u>Actual</u> <u>1985</u>	<u>Budget</u> <u>Estimate</u> <u>1986</u>	<u>Enacted</u> <u>1986</u>	<u>Current</u> <u>Estimate</u> <u>1986</u>	<u>Estimate</u> <u>1987</u>	<u>Increase +</u> <u>Decrease -</u> <u>1987 vs 1986</u>
Personnel Services.....	\$430,082.2	\$455,253.9	\$464,397.9	\$444,429.2	\$458,257.4	+\$13,828.2
Other Objects:						
21.0 Travel and transportation of persons.....	15,663.3	17,284.5	18,028.3	18,028.3	18,420.8	+392.5
22.0 Transportation of things.....	2,272.6	2,034.9	2,360.1	2,258.9	2,348.4	+89.5
23.1 Standard level user charges.....	29,106.6	34,464.4	33,618.0	33,618.0	35,374.5	+1,756.5
23.2 Rental payments to others.....	7,074.6	8,362.5	8,362.5	8,362.5	9,521.0	+1,158.5
23.3 Communications, utilities, and miscell- aneous charges.....	31,163.8	34,155.3	35,079.1	31,766.1	33,723.8	+1,957.7
24.0 Printing and reproduction.....	4,747.0	5,451.1	5,703.1	5,457.8	5,920.4	+462.6
25.0 Other services.....	86,394.5	86,865.9	90,734.6	86,051.9	92,100.5	+6,048.6
26.0 Supplies and materials.....	13,028.2	11,720.1	11,836.6	11,327.7	11,924.7	+597.0
31.0 Equipment.....	36,787.2	14,523.4	13,581.8	12,995.8	19,448.6	+6,452.8
32.0 Lands and structures.....	108.7	...	...	...	...	...
41.0 Grants, subsidies, and contributions.....	2,528.8	295.6	329.0	314.8	906.9	+592.1
42.0 Insurance claims and indemnities.....	28.1	4.4	...	...	...	...
Total other objects.....	228,903.4	215,162.1	219,633.1	210,181.8	229,689.6	+19,507.8
Total obligations.....	\$658,985.6	\$670,416.0	\$684,031.0	\$654,611.0	\$687,947.0	+\$33,336.0

EXPLANATION OF INCREASES AND DECREASES TO OBJECT CLASSIFICATIONS

	<u>Actual</u> <u>1985</u>	<u>Budget</u> <u>Estimate</u> <u>1986</u>	<u>Enacted</u> <u>1986</u>	<u>Current</u> <u>Estimate</u> <u>1986</u>	<u>Estimate</u> <u>1987</u>	<u>Increase +</u> <u>Decrease -</u> <u>1987 vs 1986</u>
Personnel services.....	\$430,082.2	\$455,253.9	\$464,397.9	\$444,429.2	\$458,257.4	

The increase in the 1987 request is necessary to continue Agency activities at current on-board levels.....

+\$13,828.2



	<u>Actual 1985</u>	<u>Budget Estimate 1986</u>	<u>Enacted 1986</u>	<u>Current Estimate 1986</u>	<u>Estimate 1986</u>	<u>Increase + Decrease - 1986 vs 1985</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$19,968.7</u>		
<u>Travel and transportation of persons.....</u>	\$15,663.3	\$17,284.5	\$18,028.3	\$18,028.3	\$18,420.8	
The increase in the 1987 request is necessary to continue Agency activities at current on-board levels.....						<u>+\$392.5</u>
There is no change in the 1986 estimate.						
<u>Transportation of things.....</u>	\$2,272.6	\$2,034.9	\$2,360.1	\$2,258.9	\$2,348.4	
The increase in the 1987 request is necessary to continue Agency activities at current on-board levels.....						<u>+\$89.5</u>
The decrease in the 1986 current estimate from the enacted represents the reduction mandated by the Balanced Budget Act.....				<u>-\$101.2</u>		
<u>Standard level user charges.....</u>	\$29,106.6	\$34,464.4	\$33,618.0	\$33,618.0	\$35,374.5	
The increase in the 1987 request is necessary to continue Agency activities at current on-board levels.....						<u>+\$1,756.5</u>
There is no change in the 1986 estimate.						
<u>Rental payments to others.....</u>	\$7,074.6	\$8,362.5	\$8,362.5	\$8,362.5	\$9,521.0	
The increase in the 1987 request is necessary to continue Agency activities at current on-board levels.....						<u>+\$1,158.5</u>
There is no change in the 1986 estimate.						

	Actual 1985	Budget Estimate 1986	Enacted 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
<u>Communications, utilities, and miscellaneous charges.....</u>	\$31,163.8	\$34,155.3	\$35,079.1	\$31,766.1	\$33,723.8	
The increase in the 1987 request is necessary to continue Agency activities at current on-board levels.....						<u>+\$1,957.7</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$3,313.0</u>		
<u>Printing and reproduction.....</u>	\$4,747.0	\$5,451.1	\$5,703.1	\$5,457.8	\$5,920.4	
The increase in the 1987 request is necessary to continue Agency activities at current on-board levels.....						<u>+\$462.6</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$245.3</u>		
<u>Other services.....</u>	\$86,394.5	\$86,865.9	\$90,734.6	\$86,051.9	\$92,100.5	
The increase in the 1987 request is necessary to continue Agency activities at current on-board levels.....						<u>+\$6,048.6</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$4,682.7</u>		
<u>Supplies and materials.....</u>	\$13,028.2	\$11,720.1	\$11,836.6	\$11,327.7	\$11,924.7	
The increase in the 1987 request is necessary to continue Agency activities at current on-board levels.....						<u>+\$597.0</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$508.9</u>		

	Actual 1985	Budget Estimate 1986	Enacted 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
<u>Equipment</u> .....	\$36,787.2	\$14,523.4	\$13,581.8	\$12,995.8	\$19,448.6	
The increase in the 1987 request is necessary to continue Agency activities at current on-board levels.....						<u>+\$6,452.8</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$586.0</u>		
<u>Lands and structures</u> .....	\$108.7	...	...	...	...	...
There is no request in the 1987 estimate and no change in the 1986 estimate.						
<u>Grants, subsidies, and contributions</u> .....	\$2,528.8	\$295.6	\$329.0	\$314.8	\$906.9	
The increase in the 1987 request is necessary to continue Agency activities at current on-board levels.....						<u>+\$592.1</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$14.2</u>		
<u>Insurance Claims and Indemnities</u> .....	\$28.1	\$4.4	...	...	...	...
There is no request in the 1987 estimate and no change in the 1986 estimate.						

# ENVIRONMENTAL PROTECTION AGENCY

Object Classification  
Includes Direct Obligations Only  
(in thousands of dollars)

## BUILDINGS AND FACILITIES

OBJECT CLASSES	Actual 1985	Budget Estimate 1986	Enacted 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
21.0 Travel and transportation of persons.....	\$54.1	\$100.0	\$100.0	\$100.0	\$100.0	...
25.0 Other services.....	4,271.4	4,915.0	4,648.0	4,450.0	7,100.0	+2,650.0
32.0 Lands and structures.....	902.6	5,175.0	400.0	383.0	400.0	+17.0
Total obligations.....	\$5,228.1	\$10,190.0	\$5,148.0	\$4,933.0	\$7,600.0	+\$2,667.0

### EXPLANATION OF INCREASES AND DECREASES TO OBJECT CLASSIFICATIONS

	Actual 1985	Budget Estimate 1986	Enacted 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1986 vs 1987
<u>Travel and transportation of persons.....</u>	\$54.1	\$100.0	\$100.0	\$100.0	\$100.0	
There is no change in the 1986 or 1987 estimate.						
<u>Other services.....</u>	\$4,271.4	\$4,915.0	\$4,648.0	\$4,450.0	\$7,100.0	
The increase in the 1987 estimate reflects the contractual support necessary for the construction of the radiation laboratory in Montgomery, Alabama.....						<u>+\$2,650.0</u>

	<u>Actual 1985</u>	<u>Budget Estimate 1986</u>	<u>Enacted 1986</u>	<u>Current Estimate 1986</u>	<u>Estimate 1987</u>	<u>Increase + Decrease - 1986 vs 1985</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$194.0</u>		
<u>Lands and structures.....</u>	\$902.6	\$5,175.0	\$400.0	\$383.0	\$400.0	
The increase in the 1987 obligation estimate is primarily for construction of a modern and safe radiation laboratory in Montgomery, Alabama.....						<u>+\$17.0</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$17.0</u>		

## ENVIRONMENTAL PROTECTION AGENCY

Object Classification  
Includes Direct Obligations Only  
(in thousands of dollars)

## HAZARDOUS SUBSTANCE RESPONSE TRUST FUND

OBJECT CLASSES	Actual 1985	Budget Estimate 1986	Enacted 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
Personnel Services.....	\$58,099.9	\$73,079.8	\$71,499.0	\$67,132.9	\$71,696.0	+\$4,563.1
<u>Other Objects:</u>						
21.0 Travel and transportation of persons.....	5,049.2	8,101.2	8,643.0	8,643.0	8,424.0	-219.0
22.0 Transportation of things.....	327.7	656.4	792.0	717.7	765.0	+47.3
23.1 Standard level user charges.....	3,564.2	5,194.0	6,040.0	6,040.0	6,052.0	+12.0
23.2 Rental payments to others.....	867.2	...	1,812.0	1,812.0	1,945.0	+133.0
23.3 Communications, utilities, and miscella- neous charges.....	3,462.8	4,393.7	3,000.0	1,336.4	3,000.0	+1,663.6
24.0 Printing and reproduction.....	377.5	890.7	992.0	902.5	962.0	+59.5
25.0 Other services.....	335,110.1	558,046.3	621,777.0	525,590.1	760,211.0	+234,620.9
26.0 Supplies and materials.....	2,242.3	4,959.7	5,609.0	5,096.4	5,432.0	+335.6
31.0 Equipment.....	7,634.8	7,857.2	9,796.0	8,888.1	9,473.0	+584.9
32.0 Land and structures.....	5.0	...	...	...	...	...
41.0 Grants, subsidies, and contributions.....	63,662.3	236,821.0	152,040.0	217,140.9	384,040.0	+166,899.1
42.0 Insurance Claims and Indemnities.....	2.2	...	...	...	...	...
Total other objects.....	422,305.3	826,920.2	810,501.0	776,167.1	1,180,304.0	+404,136.9
Total obligations.....	\$480,405.2	\$900,000.0	\$882,000.0	\$843,300.0	\$1,252,000.0	+\$408,700.0

EXPLANATION OF INCREASES AND DECREASES TO OBJECT CLASSIFICATIONS

	Actual 1985	Budget Estimate 1986	Enacted 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
Personnel Services.....	\$58,099.9	\$73,079.8	\$71,499.0	\$67,132.9	\$71,696.0	

The increase in the 1987 request is necessary to continue Agency activities at current levels.....

+\$4,563.1

	<u>Actual 1985</u>	<u>Budget Estimate 1986</u>	<u>Enacted 1986</u>	<u>Current Estimate 1986</u>	<u>Estimate 1987</u>	<u>Increase + Decrease - 1987 vs 1986</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$4,366.1</u>		
<u>Travel and transportation of persons.....</u>	\$5,049.2	\$8,101.2	\$8,643.0	\$8,643.0	\$8,424.0	
The decrease in travel in the 1987 request will support the expected level of activity for this program.....						<u>-\$219.0</u>
There is no change in the 1986 estimate.						
<u>Transportation of things.....</u>	\$327.7	\$656.4	\$792.0	\$717.7	\$765.0	
The increase in the 1987 request will support the expected level of activity for this program.....						<u>+\$47.3</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$74.3</u>		
<u>Standard level user charges.....</u>	\$3,564.2	\$5,194.0	\$6,040.0	\$6,040.0	\$6,052.0	
The increase in the 1987 request will support the expected level of activity for this program.....						<u>+\$12.0</u>
There is no change in the 1986 estimate.						
<u>Rental payments to others.....</u>	\$867.2	...	\$1,812.0	\$1,812.0	\$1,945.0	
The increase in the 1987 request reflects the expected level of activity for this program.						<u>+\$133.0</u>
There is no change in the 1986 estimate.						

	Actual 1985	Budget Estimate 1986	Enacted 1986	Current Estimate 1986	Estimate 1987	Increase + Decrease - 1987 vs 1986
<u>Communications, utilities and miscellaneous charges.....</u>	\$3,462.8	\$4,393.7	\$3,000.0	\$1,336.4	\$3,000.0	
The increase in the 1987 request reflects the expected level of activity for this program.						<u>+\$1,663.6</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$1,663.6</u>		
<u>Printing and reproduction.....</u>	\$377.5	\$890.7	\$992.0	\$902.5	\$962.0	
The increase in the 1987 request reflects the expected level of activity for this program.						<u>+\$59.5</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$89.5</u>		
<u>Other services.....</u>	\$335,110.1	\$558,046.3	\$621,777.0	\$525,590.1	\$760,211.0	
The increase in contracts in 1987 reflects the expected level of activity for this program.						<u>+\$234,620.9</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$96,186.9</u>		
<u>Supplies and materials.....</u>	\$2,242.3	\$4,959.7	\$5,609.0	\$5,096.4	\$5,432.0	
The increase in the 1987 request reflects the expected level of activity for this program.						<u>+\$335.6</u>
The decrease in the 1987 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$512.6</u>		
<u>Equipment.....</u>	\$7,634.8	\$7,857.2	\$9,796.0	\$8,888.1	\$9,473.0	
The increase in the 1987 request reflects the expected level of activity for this program						<u>+\$584.9</u>



	<u>Actual 1985</u>	<u>Budget Estimate 1986</u>	<u>Enacted 1986</u>	<u>Current Estimate 1986</u>	<u>Estimate 1987</u>	<u>Increase + Decrease - 1987 vs 1986</u>
The decrease in the 1986 current estimate from the enacted represents the reductions mandated by the Balanced Budget Act.....				<u>-\$907.9</u>		
<u>Lands and structures.....</u>	\$5.0	...	...	...	...	...
There is no request in the 1987 estimate and no change in the 1986 estimate.						
<u>Grants, subsidies, and contributions.....</u>	\$63,662.3	\$236,821.0	\$152,040.0	\$217,140.9	\$384,040.0	
The increase in the 1987 request reflects the expected level of activity for this program.						<u>+\$166,899.1</u>
The increase in the 1986 current estimate reflects expected increased state participation in response actions.....				<u>+\$65,100.9</u>		
<u>Insurance Claims and Indemnities.....</u>	\$2.2	...	...	...	...	...
There is no request in the 1987 estimate and no change in the 1986 estimate.						





