

State Environmental Expenditures And Innovations

TOPIC:

Demand placed upon states to assume greater fiscal and administrative responsibilities when addressing environmental issues has increased during the last decade. The increase in state involvement can be linked to several contributing factors such as federal program delegation; state initiated programs, and economic development patterns. In addition, the federal Environmental Protection Agency (EPA) over time has devolved substantially more environmental responsibilities to the states.

The EPA has reduced its administrative and financial responsibilities by shifting programs with increased flexibility to states when addressing environmental issues. Also, states have focused on responding more quickly to state and local environmental concerns which has led to the development and implementation of state initiated environmental programs. By implementing delegated and state initiated programs that usually exceed federal minimum standards, states have increased their own financial and administrative responsibilities.

Furthermore, states are reacting to positive economic growth patterns, market forces, and local planning decisions that have contributed to extensive suburban sprawl. This migration trend has led to an increase in environmental degradation such as the loss of farmland and wildlife habitat comprised of vital watersheds, and the destruction of scenic landscapes and recreational resources. States are addressing increasing numbers of environmental issues like these on a daily basis, and in doing so, have incurred great financial and administrative responsibilities. In response, state environmental spending in 1998 totaled \$9.3 billion. Of the \$9.3 billion spent by the states, federal fund contributions equaled \$2.5 billion. (See table 9 for details).

BACKGROUND:

Forty-nine states and the Commonwealth of Puerto Rico submitted data for this report. The state of Texas did not submit data. This report provides the basis for analyzing all state funds (i.e. state general funds, bonds, and all other state funds), federal fund contributions to states, and other funds that were spent on environmental programs in fiscal year 1998. The survey focuses on state environmental programs that manage air, water, waste, other environmental programs, wastewater infrastructure, drinking water infrastructure, hazardous waste cleanup and non-hazardous waste cleanup issues. Other topics surveyed were state air quality-related capital improvement programs and non-point source water quality improvement programs.

State Environmental Spending Results

1998 Expenditures

Air Management Programs (Capital Exclusive)

States surveyed reported spending a total of \$646 million on air management programs. A total of \$335 million (52 percent of total program resources) from state fund resources, \$102 million (16 percent of total program funds) of federal funds and \$209 million (32 percent of total program funds) of other fund resources were utilized to accomplish state air management initiatives.

State air management programs seek to meet minimum air quality standards by controlling quantities and duration that are, or tend to be, injurious to human health or welfare, animal or plant life, or would interfere with the enjoyment of life or property throughout the state. Federal provisions established in the Clean Air Act Amendments of 1990 guide state and local government air management programs. This is coupled with the grant and planning mechanisms established in the revision of the Intermodal Surface Transportation Efficiency Act known as the Transportation Equity Act for the 21st century (TEA-21).

These federal provisions were designed to ensure that planning efforts are coordinated among public, private, non-profit entities for implementing statewide programs that meet federal clean air standards for the prevention and abatement of air pollution. An example of an air management program is operating permit program. This is a stationary source program that was established to compile all air pollution regulatory compliance requirements and obligations directly related to the source of pollution into one permit. The permit contains monitoring, record keeping and reporting requirements designed to ensure that the source knows when it is in compliance or not. The intent is to make it easier for the source owner, the regulatory agency, and the public to determine if the source is in compliance.

State programs focus on educating and working with the general public to reduce vehicle miles traveled (mobile source pollution), instituting transportation control measures, reducing stationary source pollutants, planning and policy development, exploring new technologies to reduce air pollution (ie.intelligent transportation systems), enforcing air standards, assisting small businesses, and monitoring complaints. (See table 1 for results).

Air Management Programs, Fiscal 1998

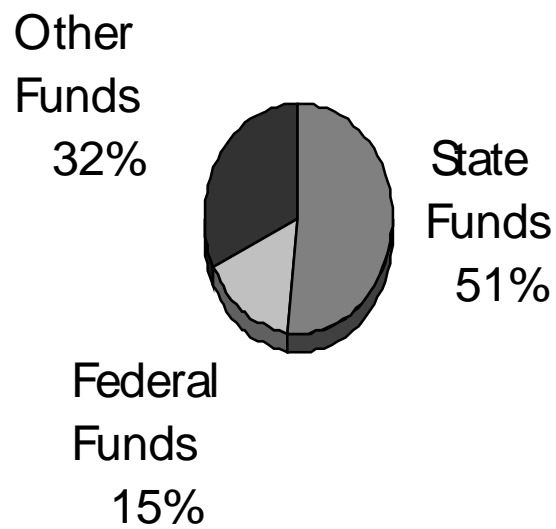




Table 1
Air Management Programs, Fiscal 1998
 (\$ in millions)

<i>Region/State</i>	<i>State Funds</i>	<i>Federal Funds</i>	<i>Other Funds</i>	<i>Total Funds</i>
NEW ENGLAND				
Connecticut	1.4	3.1	9.6	14.1
Maine	0.8	1.0	2.0	3.8
Massachusetts	2.3	6.0	1.4	9.7
New Hampshire	0.3	1.1	2.0	3.4
Rhode Island	1.0	0.2	0.7	1.9
Vermont	1.3	0.6	0.2	2.1
MID-ATLANTIC				
Delaware	1.2	1.0	3.0	5.2
Maryland	6.1	2.2	2.0	10.3
New Jersey	15.2	5.6	0.1	20.9
New York	2.3	4.5	22.1	28.8
Pennsylvania	6.6	8.1	19.6	34.3
GREAT LAKES				
Illinois	53.0	5.0	0.0	58.0
Indiana	17.5	3.8	0.0	21.4
Michigan	6.9	2.0	8.3	17.2
Ohio*	3.9	3.8	17.3	25.0
Wisconsin	9.3	2.7	0.0	12.0
PLAIN S				
Iowa	0.0	0.9	5.5	6.4
Kansas	0.5	0.8	2.7	3.9
Minnesota	7.7	1.5	8.6	17.8
Missouri	0.6	2.3	4.8	7.7
Nebraska	1.8	0.6	0.0	2.5
North Dakota	0.7	1.1	1.2	3.0
South Dakota	0.1	0.3	0.3	0.7
SOUTHEAST				
Alabama	0.0	0.7	3.8	4.5
Arkansas	0.0	0.3	2.8	3.1
Florida	25.2	0.0	0.0	25.2
Georgia	8.0	2.3	15.4	25.7
Kentucky	1.2	1.5	7.3	10.0
Louisiana	10.8	2.0	0.0	12.8
Mississippi	1.2	0.8	0.0	2.0
North Carolina	0.9	1.9	17.4	20.2
South Carolina	0.6	1.2	6.9	8.7
Tennessee	0.8	0.8	5.6	7.2
Virginia	10.0	2.4	0.0	12.4
West Virginia	4.2	1.2	0.0	5.4
SOUTHWEST				
Arizona	0.3	0.2	0.0	0.5
New Mexico	3.3	0.8	0.0	4.1
Oklahoma	0.6	1.2	4.2	5.9
Texas	N/A	N/A	N/A	N/A
ROCKY MOUNTAIN				
Colorado	0.0	2.7	10.4	13.1
Idaho	1.8	0.8	0.1	2.7
Montana	1.9	1.0	0.0	2.9
Utah	2.0	2.2	2.9	7.1
Wyoming	0.2	0.4	1.6	2.2
FAR WEST				
Alaska	1.1	1.1	1.8	4.0
California	103.8	9.8	0.0	113.6
Hawaii	0.2	0.8	2.9	3.8
Nevada	0.0	0.7	1.5	2.2
Oregon	2.0	3.0	13.2	18.2
Washington	14.6	4.4	0.0	18.9
TERRITORIES				
Puerto Rico	0.6	0.7	0.4	1.7
Total	\$ 335.0	\$ 102.4	\$ 208.9	\$ 646.5

Water Management Programs (Capital Exclusive)

States surveyed reported spending \$1.2 billion (61 percent of total funds) of state general funds on water management programs. States also reported spending \$552 million (29 percent of total funds) of federal funds and \$191 million (10 percent of total funds) of other funds on water management initiatives. State water management programs follow federal provisions created by the Clean Water Act of 1977, and reauthorized in 1987, which sets the basic structure for regulating discharges of pollutants to waters of the United States.

American heritage river initiative is an example of a water management program. It aims at helping communities restore and protect their river resources in a way that integrates natural resource protection, economic development, and preservation of historical and cultural values. Another example is the beach watch program, that attempts to strengthen standards and testing provide faster laboratory test methods and inform the public about beach conditions in their community.

Administering the development, conservation and utilization of state water resources is of primary concern to all states. The tools used to accomplish this consist of educational programs that meet federal regulatory standards to reduce polluted runoff, bond offerings to protect water quality, tax incentives, grants, watershed management planning, and monitoring/enforcing environmental standards. (See table 2 for results).

Water Management Programs, Fiscal 1998

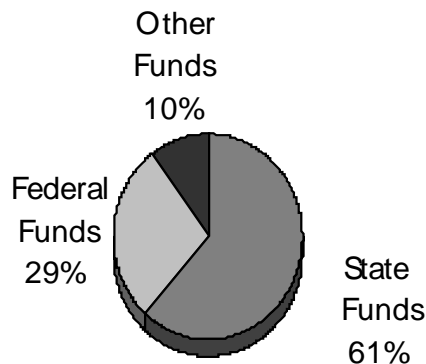




Table 2
Water Management Programs, Fiscal 1998
(\$ in millions)

<i>Region/State</i>	<i>State Funds</i>	<i>Federal Funds</i>	<i>Other Funds</i>	<i>Total Funds</i>
NEW ENGLAND				
Connecticut	4.7	4.2	5.0	13.9
Maine	3.3	2.8	0.9	7.0
Massachusetts*	1.4	3.0	N/A	N/A
New Hampshire	19.2	19.4	6.7	45.3
Rhode Island	3.0	1.8	0.7	5.5
Vermont	5.5	3.3	0.2	9.0
MID-ATLANTIC				
Delaware	8.4	10.9	2.6	21.9
Maryland	20.7	7.8	1.8	30.3
New Jersey	27.8	6.8	14.8	49.4
New York	7.7	10.7	23.6	41.9
Pennsylvania	5.0	3.2	0.0	8.2
GREAT LAKES				
Illinois	62.5	127.0	0.6	190.1
Indiana	9.6	6.8	0.0	16.4
Michigan	27.1	16.9	1.7	45.7
Ohio*	32.6	13.2	19.0	64.8
Wisconsin	36.0	8.5	0.0	44.5
PLAINS				
Iowa	2.4	4.5	1.3	8.2
Kansas	1.3	4.2	3.0	8.5
Minnesota	12.1	6.2	1.2	19.5
Missouri	3.1	4.3	56.8	64.1
Nebraska	7.0	4.2	0.0	11.2
North Dakota	4.7	5.6	2.8	13.1
South Dakota	1.0	1.6	1.1	3.6
SOUTHEAST				
Alabama	1.3	5.8	4.1	11.2
Arkansas	0.7	0.5	1.9	3.2
Florida	56.6	12.6	0.0	69.2
Georgia	10.8	7.2	2.6	20.6
Kentucky	10.6	6.0	1.9	18.5
Louisiana	0.0	3.1	0.0	3.1
Mississippi	2.9	1.9	0.0	4.8
North Carolina	7.7	1.0	1.9	10.6
South Carolina	9.7	9.4	6.4	25.4
Tennessee	6.5	3.2	5.2	14.9
Virginia	45.5	52.1	3.0	100.6
West Virginia	4.7	3.1	0.2	8.0
SOUTHWEST				
Arizona	0.1	0.1	0.0	0.2
New Mexico	6.6	2.1	0.0	8.8
Oklahoma	11.1	10.6	3.3	24.9
Texas	N/A	N/A	N/A	N/A
ROCKY MOUNTAIN				
Colorado	2.1	2.6	1.7	6.4
Idaho	9.0	3.2	1.0	13.2
Montana	3.3	4.7	0.0	8.1
Utah	3.5	3.2	0.5	7.2
Wyoming	1.1	2.5	1.2	4.8
FAR WEST				
Alaska	2.6	3.7	0.7	7.1
California	630.5	120.6	6.3	757.4
Hawaii	1.1	1.8	0.0	2.9
Nevada	0.5	1.3	0.3	2.1
Oregon	6.6	3.8	5.0	15.4
Washington	50.9	8.8	0.0	59.7
TERRITORIES				
Puerto Rico	4.2	2.7	20.2	27.0
Total	\$ 1,192.0	\$ 551.7	\$ 190.9	\$ 1,930.2

Waste Management Programs (Capital Exclusive)

States surveyed reported spending \$803 million (63 percent of total funds) of state funds, \$162 million (13 percent of total funds) of federal funds and \$313 million (24 percent of total funds) of other funds on waste management programs. Waste management programs focus on controlling highly radioactive and toxic wastes (hazardous) that must be managed with extreme caution and waste that is less toxic or non toxic (non-hazardous waste) that can be managed with a high degree of confidence. The purpose of waste management programs is to treat, store, and dispose of waste in a manner that is safe to humans and the environment.

An example of a waste management program is an environmental restoration program that attempts to cleanup inactive facilities and sites, better know as brownfields, that are abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. To address these issues, states administer programs like the one just mentioned to carry out federal initiatives that usually exceed minimum standards by utilizing grants, loans, educational training, dissemination of information, acquisition management, and tax incentives to reduce pollution. (See table 3 for results).

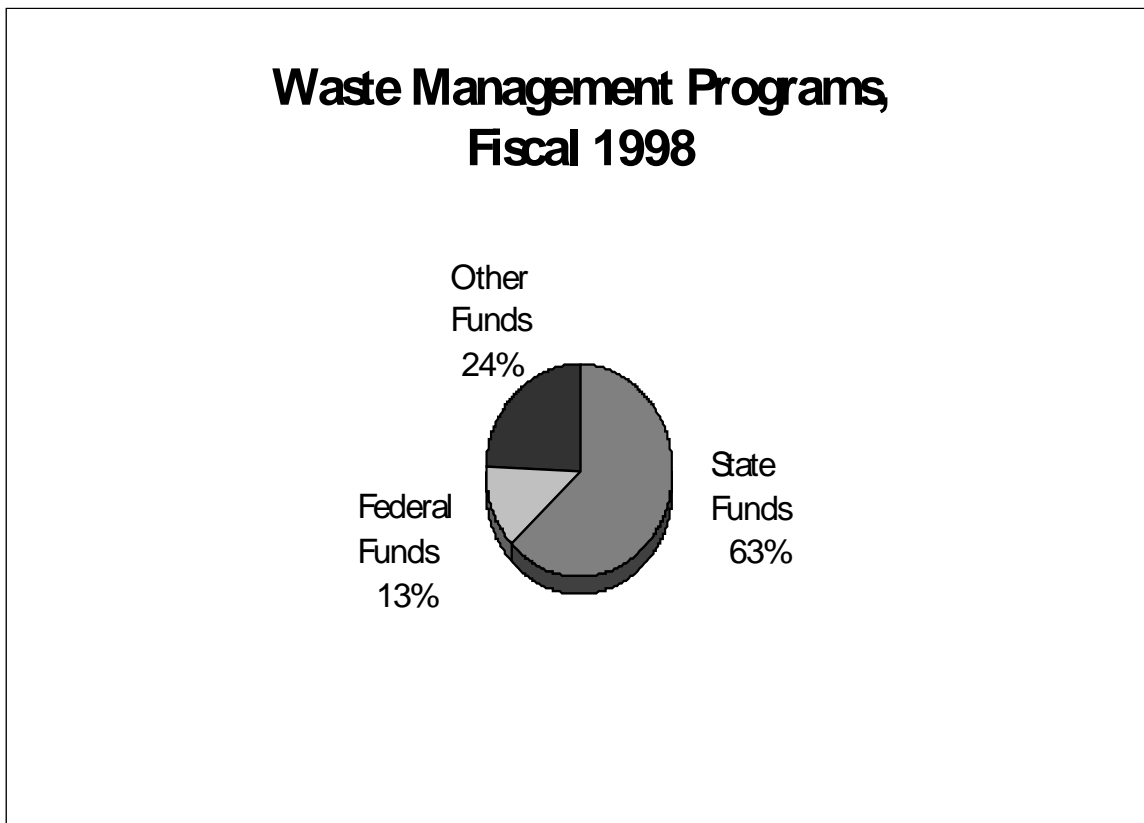


Table 3

Waste Management Programs, Fiscal 1998
(\$ in millions)



<i>Region/State</i>	<i>State Funds</i>	<i>Federal Funds</i>	<i>Other Funds</i>	<i>Total Funds</i>
NEW ENGLAND				
Connecticut	5.1	4.5	19.9	29.5
Maine	0.3	0.3	2.5	3.1
Massachusetts	20.3	5.8	5.9	32.0
New Hampshire	3.5	11.0	10.7	25.2
Rhode Island	0.5	1.8	0.4	2.7
Vermont	1.4	1.2	0.0	2.6
MID-ATLANTIC				
Delaware	1.3	2.9	6.4	10.6
Maryland	12.6	6.0	0.2	18.8
New Jersey	58.1	12.7	72.2	143.0
New York	9.5	6.0	37.5	53.0
Pennsylvania	1.5	4.4	0.0	5.9
GREAT LAKES				
Illinois	55.4	9.2	0.0	64.6
Indiana	11.5	3.3	0.0	14.7
Michigan	5.9	3.1	3.0	12.0
Ohio*	14.0	7.7	36.5	58.2
Wisconsin	176.1	4.5	0.0	180.6
PLAINS				
Iowa	0.0	0.0	3.0	3.0
Kansas	0.2	0.6	4.9	5.7
Minnesota	4.3	1.8	0.0	6.1
Missouri	1.7	5.0	19.7	26.5
Nebraska	15.1	1.4	0.0	16.5
North Dakota	0.3	0.8	0.3	1.4
South Dakota	0.5	0.2	0.1	0.8
SOUTHEAST				
Alabama	1.3	1.2	1.1	3.7
Arkansas	0.1	1.0	2.1	3.2
Florida	237.8	5.7	0.0	243.5
Georgia	3.7	4.0	19.8	27.5
Kentucky	4.8	5.9	9.0	19.7
Louisiana	32.6	4.5	0.3	37.4
Mississippi	0.9	0.6	0.0	1.6
North Carolina	6.9	4.3	5.4	16.6
South Carolina	1.4	1.9	5.4	8.7
Tennessee	1.5	1.7	4.3	7.5
Virginia	10.4	2.9	0.0	13.3
West Virginia	4.5	0.0	0.0	4.5
SOUTHWEST				
Arizona	0.3	0.0	0.0	0.3
New Mexico	2.2	0.8	0.0	3.0
Oklahoma	0.6	4.9	5.5	10.9
Texas	N/A	N/A	N/A	N/A
ROCKY MOUNTAIN				
Colorado	0.4	7.3	4.3	12.0
Idaho	1.1	1.9	0.4	3.5
Montana	0.9	0.4	0.0	1.3
Utah	0.1	0.7	4.8	5.6
Wyoming	0.6	0.5	0.1	1.2
FAR WEST				
Alaska	0.6	0.0	0.2	0.9
California	61.6	0.2	0.0	61.8
Hawaii	0.2	0.9	3.7	4.8
Nevada	0.0	1.8	14.5	16.3
Oregon	2.3	8.0	8.8	19.1
Washington	27.4	6.9	0.0	34.3
TERRITORIES				
Puerto Rico	2.7	1.5	0.0	4.2
Total	\$ 803.2	\$ 162.3	\$ 312.8	\$ 1,278.4

Other Management Programs

This category captures all other environmental management programs that were not addressed in tables 1-3. All states surveyed reported spending \$778 million (60 percent of total funds) of state funds, \$216 million (16 percent of total funds) of federal funds and \$317 million (24 percent of total funds) of other funds to address all other environmental management programs. (See table 4 for results).

Other Environmental Management Programs, Fiscal 1998

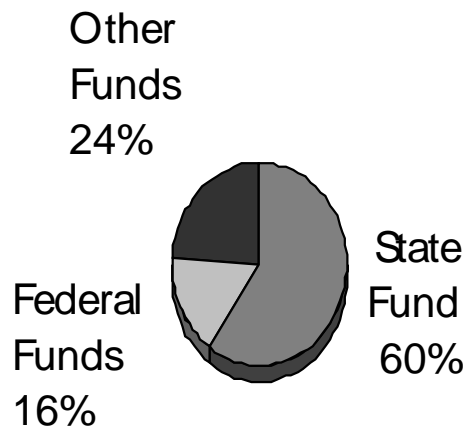


Table 4



Other Environmental Management Programs
Fiscal 1998
(\$ in millions)

<i>Region/State</i>	<i>State Funds</i>	<i>Federal Funds</i>	<i>Other Funds</i>	<i>Total Funds</i>
NEW ENGLAND				
Connecticut	0.0	0.0	0.0	0.0
Maine	0.0	0.0	0.0	0.0
Massachusetts*	20.0	N/A	0.0	20.0
New Hampshire	3.6	0.0	6.1	9.7
Rhode Island	0.0	0.2	0.5	0.7
Vermont	5.6	0.6	0.0	6.2
MID-ATLANTIC				
Delaware	20.4	50.4	11.6	82.4
Maryland	8.1	2.3	0.0	10.4
New Jersey	97.7	11.1	86.1	194.9
New York	61.4	22.0	71.9	155.3
Pennsylvania	0.0	0.0	0.0	0.0
GREAT LAKES				
Illinois	15.0	2.0	0.0	17.0
Indiana	14.3	1.4	0.0	15.7
Michigan	63.0	4.9	6.3	74.2
Ohio*	28.2	6.9	0.0	35.1
Wisconsin	0.0	0.0	0.0	0.0
PLAINS				
Iowa	1.0	1.0	1.0	3.0
Kansas	1.6	4.3	20.7	26.6
Minnesota	15.3	0.0	0.0	15.3
Missouri	1.1	5.8	39.3	46.3
Nebraska	1.0	2.2	0.2	3.4
North Dakota	0.0	0.0	0.0	0.0
South Dakota	0.4	0.2	0.1	0.6
SOUTHEAST				
Alabama	0.8	5.1	0.3	6.2
Arkansas	2.7	5.8	4.8	13.2
Florida	257.6	16.9	0.0	274.5
Georgia	4.0	8.1	27.7	39.8
Kentucky	5.2	0.1	0.6	5.9
Louisiana	0.0	0.0	0.0	0.0
Mississippi	0.0	0.0	0.0	0.0
North Carolina	0.0	0.0	0.0	0.0
South Carolina	0.0	4.8	17.0	21.8
Tennessee	0.0	0.0	0.0	0.0
Virginia	19.2	4.5	0.9	24.6
West Virginia	4.1	29.2	9.8	43.2
SOUTHWEST				
Arizona	0.6	0.0	0.0	0.6
New Mexico	0.0	0.0	0.0	0.0
Oklahoma	11.1	2.0	1.2	14.3
Texas	N/A	N/A	N/A	N/A
ROCKY MOUNTAIN				
Colorado	1.5	0.2	0.5	2.2
Idaho	1.1	0.1	0.4	1.5
Montana	10.0	9.4	0.0	19.4
Utah	1.6	2.0	1.9	5.5
Wyoming	0.8	1.6	0.0	2.4
FAR WEST				
Alaska	0.0	0.0	0.0	0.0
California	98.9	10.1	0.0	109.0
Hawaii	0.3	0.9	1.3	2.5
Nevada	0.0	0.0	1.6	1.6
Oregon	1.2	0.2	5.4	6.8
Washington	0.0	0.0	0.0	0.0
TERRITORIES				
Puerto Rico	0.0	0.9	0.0	1.0
Total	\$ 778.4	\$ 216.3	\$ 316.9	\$ 1,311.8

Wastewater Infrastructure

States surveyed spent a total of \$703 million (30 percent of total funds) of state funds, \$1.2 billion (49 percent of total funds) of federal funds and \$502 million (21 percent of total funds) of other funds on wastewater infrastructure. One state reported no expenditures on wastewater infrastructure. The totals indicate that states have spent more federal funds than state funds on wastewater infrastructures in 1998.

States follow federal provisions within the Clean Water Act (CWA) amendments of 1987 and the Safe Drinking Water Act (SDWA) amendments of 1996 when addressing wastewater issues. The CWA provides financial assistance to communities for the purpose of constructing wastewater treatment plants that comply with the act's provisions. Originally, title II of CWA provides for grants to states and municipalities for constructing wastewater treatment facilities. As amended in 1987, the CWA phased out title II grants and authorized a new grant program under title VI to support state revolving funds (SRF's) for water pollution control. For each dollar of title VI grant money a state receives, it must contribute 20 cents to its SRF.

According to the Office of Management and Budget (OMB), the President's FY2001 budget proposed \$2.5 billion in budget authority for State Revolving Fund capitalization grants. The \$2.5 billion is the capitalization amount for the Clean Water State Revolving Funds and Drinking Water State Revolving Funds. The SRF's are used to assist states in meeting federal wastewater and drinking water system provisions. Authorization for the SRF program under CWA has expired, but Congress continues to provide annual grant appropriations.

States use the combined funds to provide communities with a variety of financial options for building or upgrading municipal wastewater treatment facilities. Financial options usually consist of low interest loans, refinancing, purchasing, guaranteeing local debt, or purchasing bond insurance. Money spent on wastewater infrastructure (collectors, interceptors, combined sewers, storm water, etc.) is used to identify and repair wastewater facilities and keep rivers, streams, and beaches free from untreated sewage and harmful contaminants. (See table 5 for results).

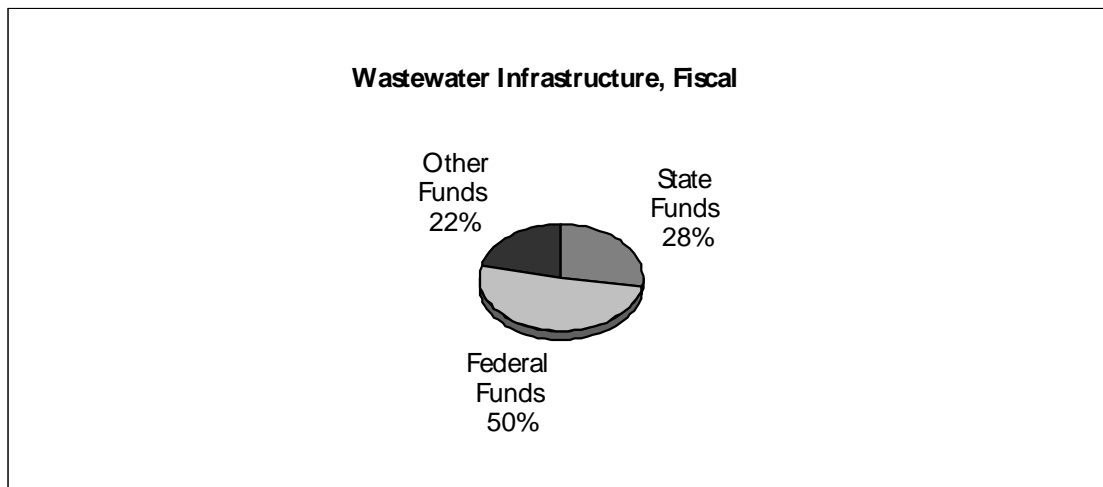


Table 5

Wastewater Infrastructure, Fiscal 1998
 (\$ in millions)



<i>Region/State</i>	<i>State Funds</i>	<i>Federal Funds</i>	<i>Other Funds</i>	<i>Total Funds</i>
NEW ENGLAND				
Connecticut	0.0	0.0	25.4	25.4
Maine*	0.0	0.9	5.8	6.7
Massachusetts*	0.0	0.0	0.0	356.0
New Hampshire	13.4	0.0	0.0	13.4
Rhode Island	3.2	10.5	16.5	30.2
Vermont	1.0	5.0	0.0	6.0
MID-ATLANTIC				
Delaware	0.0	0.0	0.3	0.3
Maryland	15.1	0.0	10.5	25.6
New Jersey	0.7	0.8	9.3	10.8
New York	34.7	173.3	0.0	208.0
Pennsylvania	65.7	15.6	0.0	81.3
GREAT LAKES				
Illinois	22.0	90.0	0.0	112.0
Indiana	5.7	35.4	0.0	41.1
Michigan	11.6	57.9	64.5	134.0
Ohio*	42.1	180.8	45.3	268.2
Wisconsin	143.3	24.1	62.9	230.4
PLAINS				
Iowa	12.0	19.0	0.0	31.0
Kansas	0.0	12.2	2.4	14.6
Minnesota	15.1	2.7	62.8	80.6
Missouri	49.3	37.2	4.7	91.2
Nebraska	0.6	3.9	6.9	11.3
North Dakota	0.0	0.0	0.0	0.0
South Dakota	0.0	5.6	1.1	6.7
SOUTHEAST				
Alabama	0.7	16.7	0.0	17.4
Arkansas	1.7	7.9	5.2	14.8
Florida	7.8	105.8	0.0	113.6
Georgia	3.4	6.3	20.8	30.5
Kentucky	20.2	5.9	0.0	26.1
Louisiana	0.0	36.0	0.0	43.2
Mississippi	0.8	9.9	5.9	16.6
North Carolina	1.0	12.4	29.0	42.4
South Carolina	2.8	13.8	0.0	16.6
Tennessee	3.9	19.7	0.0	23.6
Virginia	15.7	41.0	0.0	56.6
West Virginia	42.4	79.9	30.5	152.7
SOUTHWEST				
Arizona	5.7	28.5	0.0	34.2
New Mexico	2.5	4.5	0.0	7.0
Oklahoma	2.5	22.4	0.0	24.9
Texas	N/A	N/A	N/A	N/A
ROCKY MOUNTAIN				
Colorado	1.2	0.6	0.0	1.8
Idaho	3.0	5.7	0.0	8.7
Montana	0.0	0.5	0.0	0.6
Utah	0.0	13.1	12.3	25.4
Wyoming	0.0	0.6	1.6	2.2
FAR WEST				
Alaska	0.0	0.1	1.2	1.3
California	0.0	0.0	0.0	0.0
Hawaii	0.5	0.4	30.1	31.0
Nevada	2.0	9.8	1.6	13.4
Oregon	0.0	0.0	42.2	42.2
Washington	81.3	38.3	0.0	119.6
TERRITORIES				
Puerto Rico	84.6	17.1	6.0	107.7
Total	\$634.4	\$1,154.7	\$498.7	\$2,651.0

Drinking Water Infrastructure

States surveyed reported spending \$219 million (35.5 percent of total funds) of state funds, \$219 million (35.5 percent of total funds) of federal funds, and \$184 million (29 percent of total funds) of other funding on drinking water infrastructure. Total state and federal fund spending on drinking water infrastructure were equal in 1998. Like wastewater issues, states address drinking water issues by following federal provisions within the CWA and the SDWA to protect the quality of drinking water.

Amendments made to the 1996 SDWA authorized a state revolving loan program for drinking water infrastructure. The amendments authorize the EPA to make grants to states for capitalizing revolving loan funds for treating drinking water. States may use these funds to make low cost financing available to public water systems for constructing facilities to treat drinking water. In 1999, Congress appropriated \$775 million for capitalization grants for drinking water state revolving funds.

States utilize CWA and SDWA as a guide to focus on treating the inadequacies of aging treatment, transmission, and distribution facilities. All funds are used for monitoring transmission and distribution systems that may encounter problems such as undersized pipelines, excessive leakage, high rates of unaccounted for water, and low fire hydrant flows and pressures. (See table 6 for details).

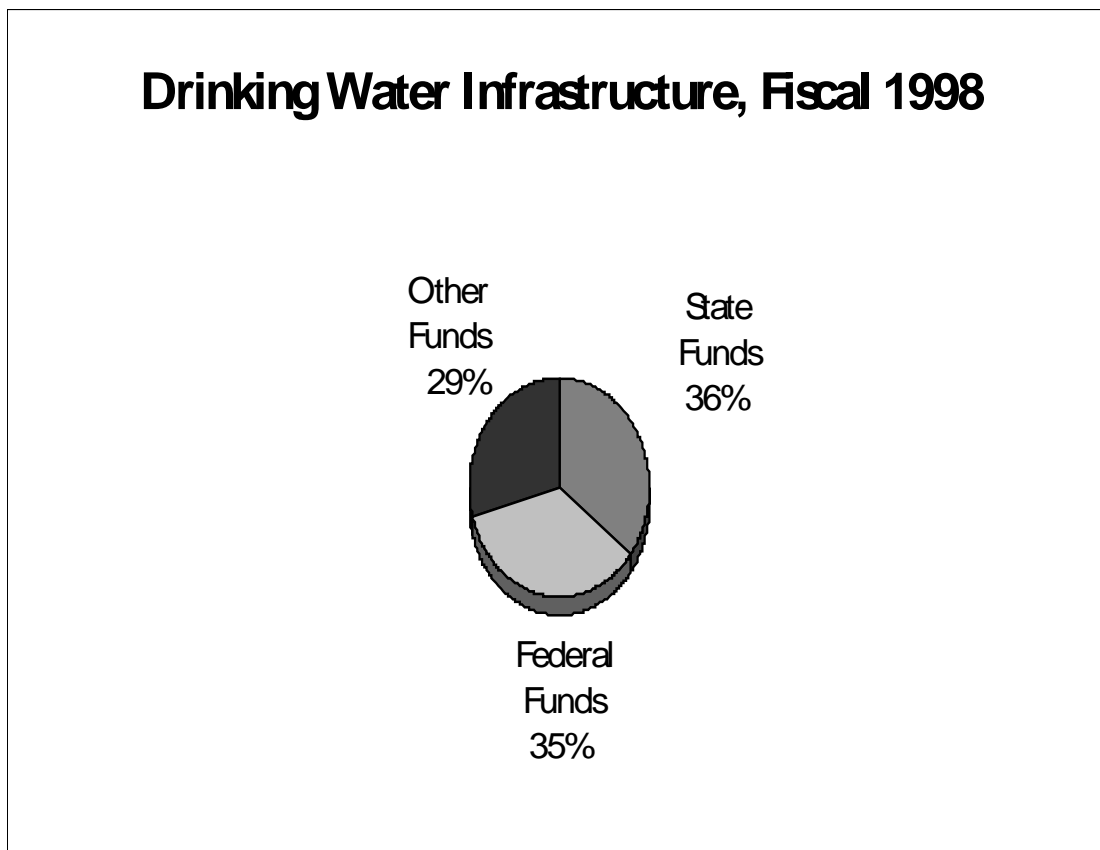


Table 6



D r i n k i n g W a t e r I n f r a s t r u c t u r e , F i s c a l 1 9 9 7
(\$ in millions)

<i>Region/State</i>	<i>State Funds</i>	<i>Federal Funds</i>	<i>Other Funds</i>	<i>Total Funds</i>
N E W E N G L A N D				
Connecticut	0.0	0.0	0.0	0.0
Maine*	0.0	3.9	0.0	3.9
Massachusetts*	0.0	0.0	0.0	173.0
New Hampshire	1.8	0.0	0.0	1.8
Rhode Island	0.3	0.0	2.5	2.8
Vermont	0.0	0.2	0.0	0.2
M I D - A T L A N T I C				
Delaware	0.0	7.1	0.0	7.1
Maryland	1.2	0.0	0.0	1.2
New Jersey	0.7	0.0	9.2	9.9
New York	55.2	0.0	0.0	55.2
Pennsylvania	0.0	6.0	37.2	43.2
G R E A T L A K E S				
Illinois	0.0	0.0	0.0	0.0
Indiana	0.0	0.0	0.0	0.0
Michigan	4.2	20.9	28.1	53.2
Ohio*	0.0	0.0	50.2	50.2
Wisconsin	0.8	0.0	0.0	0.8
P L A I N S				
Iowa	0.0	0.0	0.0	0.0
Kansas	1.0	10.0	2.0	13.0
Minnesota	0.5	0.7	0.0	1.2
Missouri	0.7	0.0	0.7	1.4
Nebraska	0.1	0.0	0.0	0.1
North Dakota	0.0	0.0	0.0	0.0
South Dakota	0.0	2.6	0.5	3.1
S O U T H E A S T				
Alabama	0.0	21.0	0.0	21.0
Arkansas	0.0	0.0	0.3	0.3
Florida	11.0	66.0	0.0	77.0
Georgia	20.9	0.5	0.0	21.4
Kentucky	0.5	1.9	0.0	2.4
Louisiana	0.0	0.0	0.0	0.0
Mississippi	0.0	5.9	0.0	5.9
North Carolina	13.3	3.1	0.7	17.1
South Carolina	1.5	7.7	0.0	9.2
Tennessee	0.4	1.8	0.0	2.1
Virginia	0.0	0.0	0.0	0.0
West Virginia	34.7	29.7	26.9	91.4
S O U T H W E S T				
Arizona	1.1	5.4	0.0	6.5
New Mexico	5.0	0.0	0.0	5.0
Oklahoma	0.0	0.7	0.0	0.7
Texas	N/A	N/A	N/A	N/A
R O C K Y M O U N T A I N				
Colorado	0.0	0.3	0.0	0.3
Idaho	0.0	0.0	0.0	0.0
Montana	0.0	0.2	0.0	0.2
Utah	0.0	0.0	4.2	4.2
Wyoming	0.0	0.0	4.8	4.8
F A R W E S T				
Alaska	1.1	0.0	0.0	1.1
California	11.1	5.9	0.0	17.0
Hawaii	0.6	0.6	16.1	17.2
Nevada	0.0	0.0	0.0	0.0
Oregon	0.0	0.6	0.6	1.2
Washington	31.1	1.5	0.0	32.6
T E R R I T O R I E S				
Puerto Rico	250.0	33.0	25.4	308.4
Total	\$ 198.8	\$ 204.1	\$ 184.0	\$ 759.9

Hazardous Waste Cleanup

States surveyed reported spending \$687 million (74 percent of total funds) of state funds, \$89 million (10 percent of total funds) of federal funds, and \$145 million (16 percent of total funds) of other funds on hazardous waste cleanup. Six states reported no expenditures on hazardous waste cleanup. State hazardous waste programs are administered according to federal guidelines established within the 1984 amendment of the Resource Conservation and Recovery Act (RCRA) and Superfund Amendments and Reauthorization Act (SARA). SARA was developed in 1986 in part to increase state involvement in all phases of the Superfund program, to encourage greater citizen participation in making decisions on how hazardous sites should be cleaned up, and to increase the size of the trust fund to \$8.5 billion over 5 years.

The Superfund tax authority expired December 31, 1995. The President's fiscal year (FY) 2000 Budget requested reinstatement of all Superfund taxes (including excise taxes on petroleum and chemicals, and a corporate environmental tax). The trust fund balance (unappropriated balance) was roughly \$2.1 billion at the end of FY 1998, and approximately \$1.3 billion at the end of FY 1999. In October 1999, Congress provided and the President signed \$1.4 billion for the Superfund program in fiscal 2000. This was \$100 million less than the administration's original request.

State programs attempt to achieve permanent remedies and utilize innovative treatment technologies when cleaning hazardous waste sites. Hazardous waste is typically described as by-products of society that can pose a potential hazard to human health or the environment when improperly managed. Hazardous by-products have characteristics of ignitability, corrosivity, reactivity, and toxicity. (See table 7 for details).

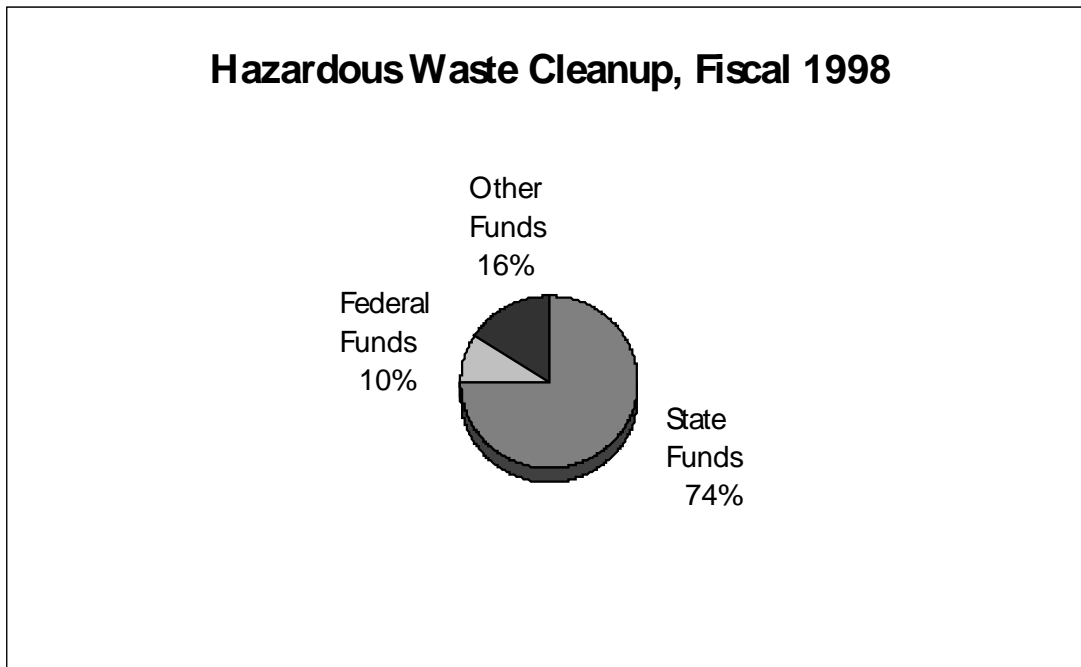


Table 7

Hazardous Waste Cleanup, Fiscal 1998
(\$ in millions)



<i>Region/State</i>	<i>State Funds</i>	<i>Federal Funds</i>	<i>Other Funds</i>	<i>Total Funds</i>
NEW ENGLAND				
Connecticut	6.0	0.0	0.0	6.0
Maine	0.0	1.3	0.7	2.0
Massachusetts*	22.7	N/A	N/A	N/A
New Hampshire	0.0	3.7	0.0	3.7
Rhode Island	0.0	0.3	1.7	2.0
Vermont	5.1	1.2	0.0	6.3
MID-ATLANTIC				
Delaware	0.0	0.0	5.5	5.5
Maryland	2.0	0.0	0.0	0.0
New Jersey	41.3	8.7	0.0	50.0
New York	55.0	3.3	25.9	84.2
Pennsylvania	0.0	0.0	23.7	23.7
GREAT LAKES				
Illinois	8.0	4.0	0.0	12.0
Indiana	13.6	3.1	0.0	16.8
Michigan	15.2	0.8	0.0	16.0
Ohio*	7.4	4.7	3.0	15.1
Wisconsin	101.8	2.5	0.0	104.3
PLAINS				
Iowa	0.0	0.0	0.2	0.2
Kansas	0.6	1.7	19.8	22.1
Minnesota	25.3	0.0	0.0	25.3
Missouri	0.0	0.3	5.2	5.4
Nebraska	0.0	0.0	0.0	0.0
North Dakota	0.0	0.0	0.0	0.0
South Dakota	0.0	0.0	0.0	0.0
SOUTHEAST				
Alabama	0.0	1.2	1.1	2.3
Arkansas	0.0	0.0	0.1	0.1
Florida	277.5	5.8	0.0	283.3
Georgia	16.8	0.0	0.0	16.8
Kentucky	0.5	1.7	3.6	5.8
Louisiana	1.5	0.7	0.0	2.2
Mississippi	0.0	0.0	0.2	0.2
North Carolina	0.8	0.0	33.4	34.2
South Carolina	0.2	0.7	2.3	3.2
Tennessee	1.0	1.4	2.1	4.5
Virginia	0.3	1.9	0.0	2.2
West Virginia	2.5	0.0	0.0	2.5
SOUTHWEST				
Arizona	0.2	1.2	0.5	1.8
New Mexico	1.0	0.2	1.1	2.2
Oklahoma	0.0	3.7	1.1	4.8
Texas	N/A	N/A	N/A	N/A
ROCKY MOUNTAIN				
Colorado	0.0	4.8	1.4	6.2
Idaho	0.0	0.0	0.0	0.0
Montana	0.3	0.4	0.0	0.7
Utah	0.0	3.6	1.0	4.6
Wyoming	0.0	0.0	0.0	0.0
FAR WEST				
Alaska	0.0	0.0	0.0	0.0
California	57.8	15.4	0.0	73.2
Hawaii	0.5	1.8	1.3	3.6
Nevada	0.0	0.3	0.6	0.9
Oregon	0.0	3.9	9.4	13.3
Washington	15.9	2.4	0.0	18.3
TERRITORIES				
Puerto Rico	0.0	0.0	6.0	6.0
Total	\$ 680.7	\$ 86.6	\$ 144.7	\$ 887.5

Non-hazardous Waste Cleanup

States surveyed reported spending \$133 million (53 percent of total funds) of state funds, \$26 million (10 percent of total funds) of federal funds, and \$93 million (37 percent of total funds) of other funds on non-hazardous waste cleanup. Thirteen states reported no expenditures on non-hazardous waste cleanup in 1998. Non-hazardous waste includes any societal by-product that does not meet the hazardous waste criteria previously described but needs to be disposed of appropriately. State non-hazardous waste programs follow federal provision established in the RCRA and focus on source reduction which involves altering the design, manufacture, or use of products and materials to reduce the amount and toxicity of what gets thrown away.

Programs will also concentrate on recycling to divert items away from landfills and composting which decomposes organic waste such as food scraps and yard trimmings. It is EPA's goal to empower state, local, and tribal governments to better manage solid waste by giving them more power and flexibility when addressing issues of source reduction, recycling, combustion, and land disposal. Examples of non-hazardous waste site clean ups include tire piles and old municipal landfills that typically contain non hazardous items such as product packaging, bottles, grass clippings, furniture, food, magazines and newspapers. (See table 8 for details).

Nonhazardous Waste Cleanup, Fiscal 1998

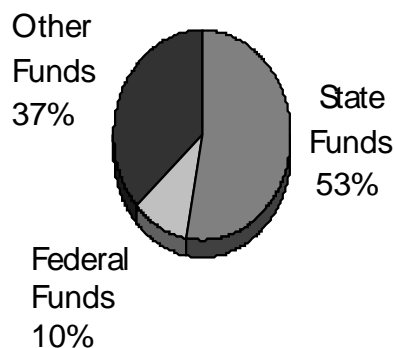


Table 8
Nonhazardous Waste Cleanup, Fiscal 1998
(\$ in millions)



<i>Region/State</i>	<i>State Funds</i>	<i>Federal Funds</i>	<i>Other Funds</i>	<i>Total Funds</i>
NEW ENGLAND				
Connecticut	0.0	0.0	0.0	0.0
Maine	0.0	0.0	23.0	23.0
Massachusetts*	1.5	N/A	N/A	N/A
New Hampshire	1.8	0.0	0.0	0.0
Rhode Island	0.5	1.8	2.0	4.3
Vermont	0.9	0.3	0.0	1.2
MID-ATLANTIC				
Delaware	0.0	0.0	0.0	0.0
Maryland	0.0	0.0	0.0	0.0
New Jersey	0.0	0.0	0.0	0.0
New York	29.2	6.0	11.6	46.9
Pennsylvania	1.7	0.0	0.0	1.7
GREAT LAKES				
Illinois	2.0	0.0	0.0	2.0
Indiana	4.1	0.4	0.0	4.5
Michigan	48.4	2.3	1.2	51.9
Ohio*	4.2	0.2	3.0	7.4
Wisconsin	1.5	1.3	0.0	2.8
PLAIN S				
Iowa	0.0	0.0	1.0	1.0
Kansas	0.0	2.0	1.2	3.2
Minnesota	0.0	0.0	0.0	0.0
Missouri	0.0	2.1	1.9	4.0
Nebraska	5.3	0.0	0.0	5.3
North Dakota	0.0	0.0	0.0	0.0
South Dakota	0.1	0.6	0.1	0.8
SOUTHEAST				
Alabama	1.3	0.0	0.0	1.3
Arkansas	0.0	0.0	8.7	8.7
Florida	1.0	0.0	0.0	1.0
Georgia	6.6	0.0	7.2	13.8
Kentucky	0.0	0.1	2.8	2.9
Louisiana	8.5	0.0	0.0	0.0
Mississippi	0.3	0.0	1.5	1.8
North Carolina	0.0	0.0	0.0	0.0
South Carolina	0.0	0.0	2.8	2.8
Tennessee	0.0	0.0	4.9	4.9
Virginia	1.2	0.0	0.0	0.0
West Virginia	4.5	0.0	0.0	4.5
SOUTHWEST				
Arizona	0.0	0.0	0.0	0.0
New Mexico	0.1	0.0	0.0	0.1
Oklahoma	3.0	0.0	0.2	3.3
Texas	N/A	N/A	N/A	N/A
ROCKY MOUNTAIN				
Colorado	0.0	0.0	0.0	0.0
Idaho	0.0	0.0	0.0	0.0
Montana	0.6	0.0	0.0	0.6
Utah	0.0	0.0	3.2	3.2
Wyoming	0.0	7.1	1.6	8.7
FAR WEST				
Alaska	0.0	0.0	0.0	0.0
California	0.0	0.0	0.0	0.0
Hawaii	0.0	0.0	3.0	3.0
Nevada	0.0	0.6	11.4	12.0
Oregon	0.0	1.0	0.4	1.3
Washington	4.9	0.0	0.0	4.9
TERRITORIES				
Puerto Rico	0.0	0.0	0.0	0.0
Total	\$ 133.2	\$ 25.7	\$ 92.7	\$ 238.7

Total State and Federal Environmental Spending

States surveyed reported spending an aggregate of \$4.9 billion (52 percent of total funds) of state funds, \$2.5 billion (27 percent of total funds) of federal funds, and \$2 billion (21 percent of total funds) of other funds on environmental programs in fiscal 1998. The total of state general, federal, and other funds spent by states on environmental programs was \$9.3 billion. (See table 9 for details).

Total Environmental Spending by Fund Source, Fiscal 1998

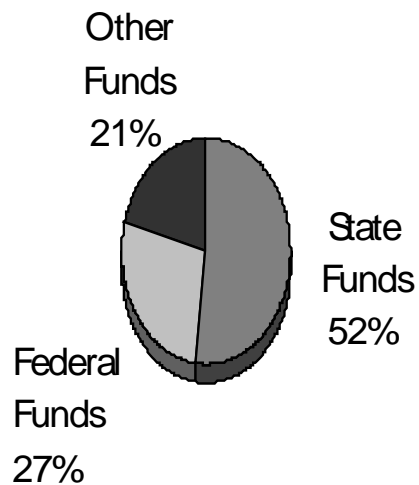


Table 9

**Total Environmental Spending by Fund Source,
Fiscal 1998
(\$ in millions)**



<i>Region/State</i>	<i>State Funds</i>	<i>Federal Funds</i>	<i>Other Funds</i>	<i>Total Funds</i>
NEW ENGLAND				
Connecticut	17.2	11.8	59.9	88.9
Maine	4.5	10.3	34.8	49.6
Massachusetts	68.2	14.8	7.3	90.3
New Hampshire	43.6	35.2	25.5	104.3
Rhode Island	8.5	16.6	25.0	50.1
Vermont	20.8	12.4	0.4	33.6
MID-ATLANTIC				
Delaware	31.3	72.3	29.4	133.0
Maryland	65.8	18.3	14.5	98.6
New Jersey	241.5	45.7	191.7	478.9
New York	254.9	225.7	192.5	673.2
Pennsylvania	80.5	37.3	80.5	198.3
GREAT LAKES				
Illinois	217.9	237.2	0.6	455.7
Indiana	76.3	54.2	0.0	130.4
Michigan	182.3	108.8	113.1	404.2
Ohio*	132.4	217.3	174.3	524.0
Wisconsin	468.8	43.6	62.9	575.3
PLAIN S				
Iowa	15.4	25.4	12.0	52.8
Kansas	5.1	35.8	56.6	97.5
Minnesota	80.3	12.9	72.6	165.8
Missouri	56.4	57.1	133.2	246.6
Nebraska	31.0	12.3	7.1	50.4
North Dakota	5.7	7.5	4.3	17.5
South Dakota	1.9	11.1	3.3	16.3
SO UTH EAST				
Alabama	5.5	51.8	10.5	67.7
Arkansas	5.2	15.5	25.9	46.6
Florida	874.5	212.8	0.0	1087.3
Georgia	74.2	28.4	93.5	196.1
Kentucky	43.0	23.1	25.2	91.3
Louisiana	53.4	46.3	0.3	100.0
Mississippi	6.0	19.0	7.6	32.7
North Carolina	30.6	22.7	87.8	141.1
South Carolina	16.2	39.3	40.7	96.1
Tennessee	14.1	28.5	22.0	64.6
Virginia	102.2	104.8	3.9	210.9
West Virginia	101.7	143.1	67.4	312.1
SO UTH WEST				
Arizona	8.3	35.4	0.5	44.1
New Mexico	20.7	8.5	1.1	30.2
Oklahoma	28.8	45.4	15.4	89.6
Texas	N/A	N/A	N/A	N/A
ROCKY MOUNTAIN				
Colorado	5.2	18.5	18.3	42.0
Idaho	16.0	11.8	1.9	29.6
Montana	17.1	16.7	0.0	33.8
Utah	7.2	24.7	30.7	62.6
Wyoming	2.7	12.7	10.9	26.3
FAR WEST				
Alaska	5.5	4.9	3.9	14.2
California	963.7	162.0	6.3	1132.0
Hawaii	3.4	7.2	58.2	68.8
Nevada	2.5	14.5	31.4	48.4
Oregon	12.1	20.5	84.9	117.5
Washington	226.1	62.3	0.0	288.4
TERRITORIES				
Puerto Rico	342.1	56.0	57.9	456.1
Total	\$ 4,755.8	\$ 2,504.0	\$ 1,949.6	\$ 9,209.4

According to the President's proposed federal budget for fiscal year 2001, total federal outlays for natural resources and environmental issues in 1998 were approximately 22.3 billion. This represents roughly 7 percent of total federal outlays (\$1.7 trillion) in 1998. The Office of Management and Budget (OMB) estimates that spending on natural resources and environmental initiatives will range from 24 to 26 billion dollars between years 1999-2005. (See table10 for details).

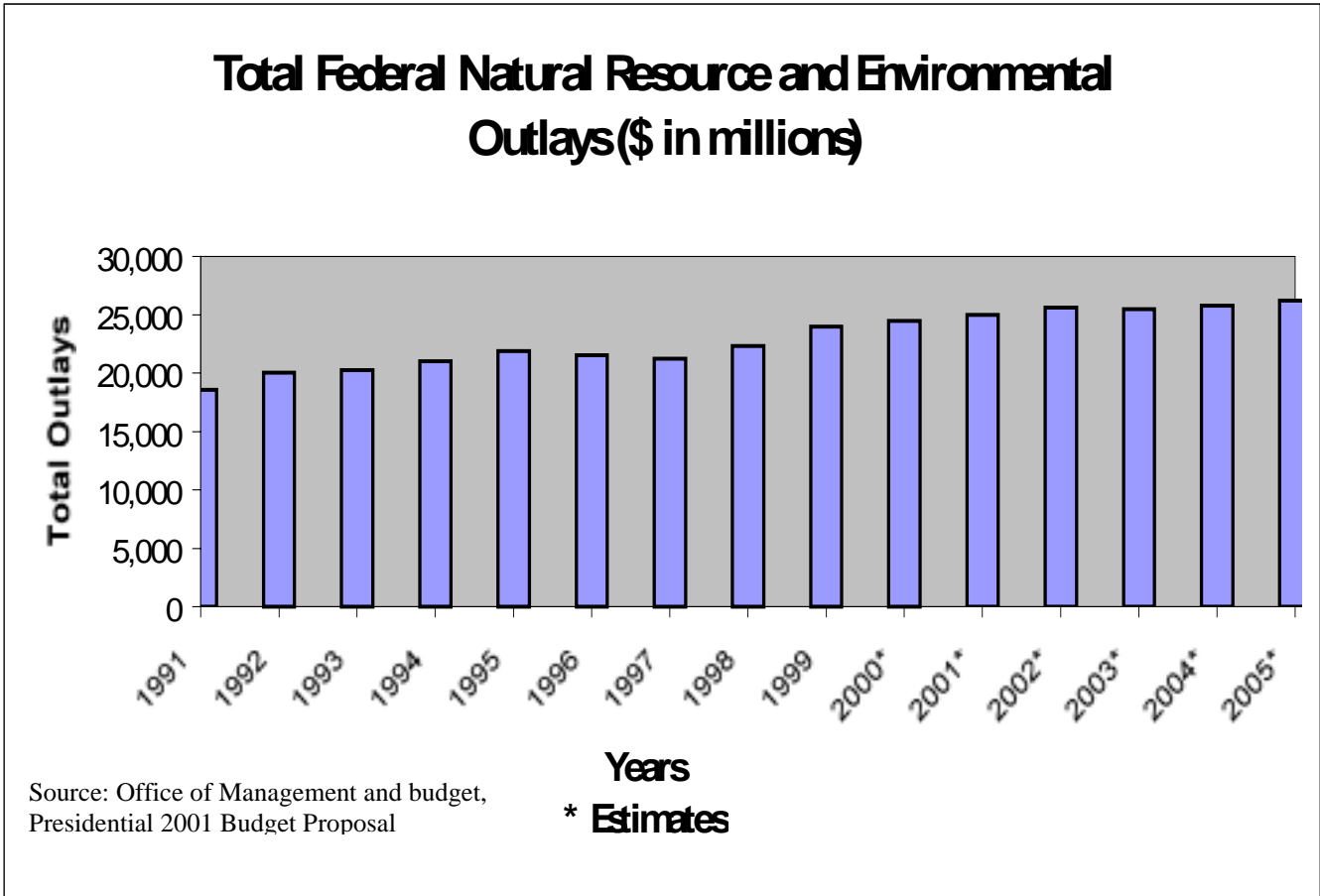


Table 10					
Outlays By Function and Subfunction: 1991-2005					
(In millions of dollars)					
	1991	1992	1993	1994	1995
Water Resources	4,366	4,559	4,258	4,491	4,628
Conservation and Land Management	4,047	4,581	4,777	5,161	5,318
Recreational Resources	2,137	2,378	2,620	2,619	2,801
Pollution Control and Abatement	5,862	6,087	6,072	6,055	6,513
Other Natural Resources	2,148	2,420	2,512	2,701	2,655
Total Spending	18,559	20,025	20,239	21,026	21,915
	1996	1997	1998	1999	2000 estimate
Water Resources	4,539	4,414	4,650	4,728	5,562
Conservation and Land Management	5,396	5,067	5,475	5,679	5,082
Recreational Resources	4,673	2,785	2,984	3,498	3,611
Pollution Control and Abatement	6,182	6,292	6,422	6,898	7,202
Other Natural Resources	2,734	2,669	2,769	3,165	3,022
Total Spending	21,524	21,227	22,300	23,968	24,479
	2001 estimate	2002 estimate	2003 estimate	2004 estimate	2005 estimate
Water Resources	3,652	3,701	3,880	3,850	3,929
Conservation and Land Management	6,611	7,040	6,568	6,801	6,954
Recreational Resources	3,771	3,818	3,981	4,090	4,207
Pollution Control and Abatement	7,630	7,691	7,663	7,704	7,798
Other Natural Resources	3,309	3,369	3,401	3,354	3,294
Total Spending	24,973	25,619	25,493	25,799	26,182

Also, the OMB expects an increase in state-by- state obligations for major federal formula grant programs issued by the EPA to state and local governments during years 1999-2000. These figures are derived from Budget Information for States developed by the OMB. Federal formula grant program obligations to states in 1998 were approximately \$3.4 billion. The Presidents 2001 budget proposal projects total outlays for discretionary and mandatory federal grants to state and local government to increase between years 1999-2001. (See tables 11 and 12 for details).

Table 11					
Summary of Programs by Agency, Bureau, and Programs (obligations in millions of dollars)	FY 1998 (actual)	Estimated FY 1999 Obligations From:			FY 2000 (estimated)
		Previous authority	New Authority	Total	
Environmental Protection Agency, Office of Air and Radiation					
Air Pollution Control Program Grant (66.001)	185	4	196	199	199
Clean Air Partnership Fund (66.xxx)	N/A	N/A	N/A	N/A	200
Environmental Protection Agency, Office of Water					
Water Pollution Control-State and Interstate Program Support(section 106) (66.419)	95	1	116	117	16
Public Water System Supervision Program Grants (66.432)	90	5	94	98	94
Underground Injection Control Program Grants (66.433)	11	1	10	11	10
Drinking Water State Revolving Fund (66.458 (a))	1,235	375	775	1,150	825
Clean Water State Revolving Fund (66.458 (b))	1,500	474	1,771	2,245	947
Non-Point Source Grants (66.460)	105	1	200	201	200
Environmental Protection Agency, Office of Enforcement, Compliance and Assurance					
Pesticides Enforcement Grants (66.700 (a))	17	1	20	21	20
Environmental Protection Agency, Office of Prevention, Pesticides, and Toxic Substances					
Pesticides Program Implementation (66.700 (b))	14	1	13	14	13
Toxic Substances Enforcement Grants (66.701)	4	3	7	10	7
Environmental Protection Agency, Office of Solid Waste and Emergency Response					
Hazardous Waste Financial Assistance to States (66.801)	98	3	99	102	99
Underground Storage Tanks (UST) State Grants (66.805)	11	*	11	11	12
Totals	3,365	869	3,312	4,179	2,642
*\$500,000 or less					

Table 12

Federal Grants to State and Local Governments for Natural Resources and the Environment
(in millions of dollars)

Function, Category, Agency and Program	Budget Authority			Outlays		
	1999 Actual	2000 Estimate	2001 Estimate	1999 Actual	2000 Estimate	2001 Estimate
Natural Resources and Environment						
Discretionary:						
Department of Agriculture:						
Natural Resources Conservation Service:						
Resource Conservation and Development				1	1	1
Watershed and flood prevention operations	52	41	17	52	66	58
Forest Service:						
State, private and international forestry	84	102	123	90	98	117
Management of national forest lands for subsistence uses	3		6		3	6
Department of commerce:						
National Oceanic and Atmospheric Administration:						
Operations, research, and facilities	103	120	135	91	91	101
Pacific coastal salmon recovery		58	160		58	160
Department of the Interior:						
Office of Surface Mining Reclamation and Enforcement:						
Regulation and technology	51	51	45	50	50	54
Abandoned mine reclamation fund	170	181	196	154	152	192
Bureau of Reclamation:						
Bureau of reclamation loan subsidy	11	12	9	9	14	10
United States Geological Survey:						
Surveys, investigations and research			8			8
Surveys, investigations and research			17			16
United States Fish and Wildlife Service:						
Commercial salmon fishery capacity reduction		5			5	
Non-game wildlife start grants			100			25
Cooperative endangered species conservation fund	14	23	65	9	15	23
Wildlife conservation and appreciation fund	1	1	1	1	1	1
Miscellaneous permanent appropriations	2	2	2	2	2	2
National Park Service:						
National recreation and preservation		2	20		1	13
Land acquisition and State assistance		20	145		7	51
Historic preservation fund	72	75	72	37	73	80
Departmental Management:						
Priority Federal land acquisitions and exchanges		20			10	4
Environmental Protection Agency:						
State and Tribal Assistance Grants	3408	3446	2907	2745	3064	3400
Hazardous substance superfund	179	166	171	156	134	141
Leaking underground storage tank trust fund	62	60	62	59	62	61
Total, discretionary	4212	4385	4261	3456	3907	4524

Table 12 continued Function, Category, Agency and Program	Budget Authority			Outlays		
	1999 Actual	2000 Estimate	2001 Estimate	1999 Actual	2000 Estimate	2001 Estimate
Natural Resources and Environment						
Mandatory:						
Department of the Interior:						
Bureau of Land Management:						
Miscellaneous permanent payment accounts	50	5	8	50	5	8
Minerals Management Services:						
National Forests fund, payment to States	3	5	3	3	5	3
Leases of lands acquired for flood control, navigation, and allied purposes						
	1	1	1	1	1	1
United States Fish and Wildlife Service:						
Federal aid in wildlife restoration	199	228	237	212	202	209
Sport fish restoration	279	306	292	257	292	293
Departmental Management:						
Everglades watershed protection						
				119	42	
Everglades restoration account	4	1	1		4	1
Department of the Treasury:						
Financial Management Service:						
Payment to terrestrial wildlife habitat restoration trust fund	5	5	5	5	5	5
Total, mandatory	541	551	547	647	556	520

In addition to the state and federal funding programs previously listed, states are also funding their own air quality capital improvements programs and innovative non-point source water quality, open space, and farmland preservation programs.

Air Quality-Related Capital Improvements

Ten states provided a diverse list of programs that address issues of air quality-related capital improvements with effective dates ranging from as far back as 1970 to more recently in 1999. States tend to focus on all emission sources when addressing air quality capital improvements. Some examples of emission sources that may require capital improvements funds are automobiles, heavy trucks/buses, factories, power plants, degreasing operations, lawn & recreation equipment, marine engines, aircraft, farm equipment, construction equipment, outdoor equipment, locomotives, industrial equipment and facilities.

States adhere to National Ambient Air Quality Standards (NAAQS) and the 1990 Clean Air Act amendments when addressing air pollution issues. Examples of state air quality related capital improvement programs are listed below in table 13. To achieve air related capital improvements, states are utilizing incentive vouchers, technical and grant assistance programs, sales tax credits, bonds, dissemination of technical information, automotive inspections and maintenance, enforcement of standards, and funds to make loans readily available. (See table 13 for details).

Table 13				
Air Quality-Related Capital Improvements				
(\$ in millions)				
<i>Region/State</i>	<i>Program</i>	<i>Description</i>	<i>Funds</i>	<i>Effective Date</i>
Arizona	Voluntary Lawn and Garden Equipment Emission Reduction	Provides incentives including vouchers for the purchase of devices that generate lower emissions.	0.05	1997
Georgia	Vehicle Inspection and Maintenance	Assists private test station owners to purchase and install dynameters for vehicle emissions testing program.	N/A	N/A
Colorado	Air Quality Related Capital Improvements	N/A	0.2	
Kansas	Kansas State Small Business Assistance Programs	N/A	0.104	
Maine	Clean Fuel Tax Credit	In 1997, the Maine Legislature approved a sales tax credit for individuals purchasing "clean fuel" vehicles. The program took effect in fiscal 1999 costing \$3.370.	N/A	1999
New York	Air Resources	Modernization of air quality equipment.		
	Clean Air Operating Permit Program	Clean Air Vehicle Emissions Inspection and Maintenance Program Instrumentation, protocol assessment and remote sensing.	3	1997
	Financial Assistance to Business-Vehicle Inspection and Maintenance	State assistance to businesses participating in the Enhanced Vehicle Inspection and Maintenance Program.	15.1	1997
	Clean-Fueled Buses	Matching grants to local governments for the purchase of clean fueled buses and related funding infrastructure.	4	1996
	Clean-Fueled Vehicles	Funding for the purchase of clean-fueled vehicles and infrastructure for use by State agencies.	4	1996

	Clean Air for Schools	State Assistance to schools to convert coal-fired furnaces to cleaner energy sources.	25	1996
Ohio	Small Business Ombudsman for Clean Air Act	The Ohio Air Quality Development Authority provides technical assistance to eligible small businesses and administers a small business assistance grant program.	0.37	1993
	Ohio Air Quality Authority	The Ohio Air Quality Development Authority issues bonds to finance air quality facilities at private and public sector entities. In 1998 facilities included air pollution control; solid waste disposal, processing and reuse; air pollution prevention; and energy efficiency and conservation.	225.5	1970
Puerto Rico		Produces guidance in a document for the automobile industry to understand how to comply with applicable state and federal regulations.	0.03	1998
Vermont	Indoor air quality	Capital expenditures.	0.15	1998
Virginia	Small business Environmental Compliance Assistance Fund	Fund created to make loans to small businesses for the purchase of environmental pollution control and prevention equipment.	0	6/05
Washington	Low Income Emission Repair Assistance Program	Vancouver Salvation Army - Assistance to low income car owners to pass emission tests requirements or meet waiver requirements. Salvation Army does qualification screening.	0.14	1997

Innovations:

Non-point Source Water Quality, Open Space, and Farmland Preservation

Out of all states surveyed, thirty-eight states acknowledged that they were actively participating in some type of non-point source program. Congress enacted section 319 of the “Clean Water Act” in 1987 that created a nation wide program to control non-point sources of pollution. Non-point source pollution can be described as water pollution caused by rainfall or snow melting over and through the ground carrying natural and human-made pollutants into lakes, streams, wetlands, rivers, coastal waters, and ground water.

Non-point source water quality programs have been in existence since the early 1920’s. These programs provided farmers with personnel and technical assistance for developing and implementing soil and water plans. More recently, states have become very creative and innovative when addressing environmental issues. In 1998, 240 green ballot initiatives to protect open space and enhance local livability were considered in communities across the country. Approximately seventy percent of these were adopted authorizing \$7.5 billion in state and local spending.

Because of increasing public demand to develop ways to keep growing while preserving a high quality of life, the Clinton-Gore Livability Agenda developed “Better America Bonds.” Communities will pay zero interest and the principal is due in 15 years. Bondholders will receive tax credits from the federal government equal to the amount of interest they would have received from the communities. This will provide states and communities with the financial tool necessary to preserve open space, protect water quality and farmland. This was included in the Presidents 2001 budget proposal, but because it requires a change in the current tax code and no new tax bill was brought forth during this year, it was not approved. It still remains a top priority for the administration and the EPA.

According to survey results, states are currently using tools such as grants, preservation loans, partial funding efforts, pass through funds, acquisition of conservation easements, innovative technology, infrastructure investments aiming to preserve, cost-share funding, increased buffer zones, animal waste controls and financial incentives to address environmental non-point source water quality issues. (See table 14 for details).

Table 14
Nonpoint Source Water Quality, Open Space, and Farmland Preservation
(\$ in millions)

<i>Region/State</i>	<i>Program</i>	<i>Description</i>	<i>Funds</i>	<i>Effective Date</i>
NEW ENGLAND				
Connecticut	Nonpoint Source	Nonpoint source federal grant program with the U.S. EPA includes \$700,000 in federal, \$20,000 in state, and \$300,000 in local funds.	\$1.2	1998
Maine				
Massachusetts	Agricultural Preservation Restrictions	Purchase conservation restrictions on farmland, allowing farms to remain in agricultural use, while preserving the land.	3.5	1997
	Agro-tech Grants	Grants to farmers, agribusiness, and other institutions to develop innovative environmental programs.	0.2	1993
	Nonpoint Fencing	Grants to farmers to fence off animal waste runoff from water sources.	0.5	1996
New Hampshire	Various nonpoint source programs.	Federal Section 317 funds.	0.9	
Rhode Island	State Land Acquisitions (SLA)	The Greenspace Plan identifies the leveraging of state bond funds with federal and nonprofit funds to coordinate preservation projects. Real estate acquisition will achieve the goals of watershed protection, expansion of open space and recreation areas, and protection of wildlife habitat and natural heritage areas.	1.6	1980
	Farmland Development Rights Acquisition	The Agricultural Land Preservation Commission is a state commission that purchases development rights on prime agricultural lands throughout the state. Farmers are compensated for the development value of their agricultural land. In exchange, the state is assured that the land will remain farmland in the future. Through December 1997, 2,709 acres representing 34 farms have been preserved using \$13.5 million in bond funds and \$3.2 million in private funds.		1994
Vermont	Nonpoint	Capital Expenditures	1.1	1990
	Nonpoint	Program expenditures	0.9	1990
	Fish and wildlife	Habitat protection	1	1985
	Vermont Housing and Conservation Board	Open space, farmland protection	7.5	1986
MID-ATLANTIC				

Delaware	Twenty-first Century Fund	Provides funding to preserve open space and farmland as well as providing funding for Delaware's Water/Watershed infrastructure fund.	14.2	1995
Maryland	Md. Agricultural Water Quality Cost Share Program	Assists farmers to pay costs of installing best management and pollution control practices to protect water quality.	4.8	1983
	Maryland Cover Crop Program	Provides partial funding to farmers as an incentive to plant certain cover crops to assist in reducing soil/nutrient runoff.	1.3	1993
	Maryland Resource Conservation Operations Program	Provides personnel and technical assistance to soil conservation districts to help farmers develop and implement soil and water plans on their farms.	3.9	1920
	Maryland Agri Land Preservation Foundation	Foundation preserves productive agricultural land, woodland, and open space by purchasing development rights offered voluntarily from landowners.	16.8	1977
	Program Open Space-National Heritage Fund	Land acquisitions for land preservation and outdoor recreation facilities.	24	1969
	Woodland Incentive Program	Provides nonindustrial woodland owners with financial assistance for tree planting, timber stand improvement, and other forest management activities.	0.2	1986
New Jersey	Farmland Preservation	Bonds.	27.8	1981
	Open Space	Green Acre bonds. In fiscal 1999, a new program for preserving open space was initiated. In fiscal 1999, \$50 million was appropriated, and in fiscal 2000, \$98 million was constitutionally dedicated.	70.5	1997
	Agriculture	Conservation Cost Share.	0	1997
	CBT dedication	Watershed monitoring and planning.	3	1997
New York	Farmland Protection	Purchase of Farmland Development Rights.	4	1997
	Non-Point Source Pollution Control	Matching grants for projects to protect watersheds from non-point source pollution.	5.4	1997
	Land Acquisition	Open Space Preservation through acquisition and easements.	36	1997
Pennsylvania	Chesapeake Bay	Nonpoint source implementation	2.9	1984
	Nutrient Management	Nutrient management plan implementation.	1.4	1993
	Farmland Preservation	Purchase of agriculture conservation easements.	37.9	1989
GREAT LAKES				
Illinois	Ill. Dept. of Agriculture: Conservation 2000 Conservation Practices Program	Cost-share assistance to eligible landowners for the adoption or construction of conservation practices that conserve soil and protect water quality.	3	1996

	Ill. Dept. of Agriculture: Conservation 2000 Sustainable Agriculture Program	Grants to institutions, organizations and individuals for sustainable agriculture research, demonstration, or education projects. Sustainable agriculture systems serve to maintain farm profitability while protecting the natural resource base.	0.6	1996
	Ill. Dept. of Agriculture: Conservation 2000 Streambank Stabilization and Restoration Program	Financial assistance to eligible landowners for installing vegetative or bioengineering techniques to stabilize or restore severely eroding streambanks.	0.5	1996
	Ill. Dept. of Agriculture: Farmland Protection Program	Coordination with state agencies on methods to minimize farmland conversion impacts caused by their programs and projects.	0	1980
	Dept. of Natural Resources Land and Water Reserve, Nature Preserve	Habitat protection programs for public/private landowners who voluntarily place restrictions on their lands with significant natural areas and endangered species habitats. This provides property tax benefits to owners, not cash payments.	0.5	1963
	Dept. of Natural Resources Conservation Easement Public Benefit Certification	Reduced assessed valuation of property (8.3 percent instead of 33.3 percent) for landowners who permanently encumber their property with conservation easement, upon application to the department of natural resources.	5	1995
Michigan	Conservation Easements	Part of the wetland permitting program easements are recorded, but no funding is spent to pay for them. Also recorded under wetland restoration.		
	NonPoint Source Grant	Some of the activities listed previously are options under this program, but the actual amount can not be identified without a detailed review of contract files.		
Ohio	Nonpoint Source Program	CWA Section 319(h) Pass-through Funds: Nonpoint Source Implementation Program	1.4	1990
	Water Pollution Control Loan Fund (WPCLF)	Projects for the implementation of Nonpoint Source Pollution Control Program are eligible for participation from the WPCLF. Funds are provided by direct loans or through linked deposits.	6.1	1989
	Habitat Restoration	The Lake Erie Commission administers a grant fund that disburses funds for habitat restoration.	0.2	1994
	Wetland Restoration Program	Provides funding for costs associated with wetland habitat restoration projects on prior converted and farmed wetlands.	0.1	1991

	Pastures to Prairies Program	Furnishes partial funding to landowners for costs associated with converting old pasture and odd areas into tall grass prairie habitat.	0.02	1996
	Wetland Reserve Program	A partnership between the state department of natural resources and the USDA-Natural Resources Conservation Service to acquire permanent and long-term conservation easements on wetlands and riparian area habitats.	0.2	1995
	Stream Banking	A partnership with the department of natural resources and the Soil and Water Conservation Districts (SWCDs) to acquire permanent conservation easements on riparian area habitats. The SWCDs work with land trusts, park districts, and other government agencies to develop riparian area protection plans for their watersheds.	1.3	1995
	Watershed Management	The department of natural resources collaborates with local SWCDs to implement watershed management projects that reduce agricultural nonpoint source pollution. Watershed projects provide cost-share funds and incentives to install Best Management Practices to reduce or resolve pollution problems.	0.2	1995
	Conservation Works of Improvement	The department of natural resources partners with local county commissioners, county engineers, and SWCDs to complete construction and maintenance projects on streams and field drainage systems. The projects include installation of Best Management Practices for long-term reduction or resolution of pollution problems.	0.3	1995
	Nonpoint Source Pollution Control/Stormwater	The department of natural resources partners with SWCDs and county engineers to design, redesign, construct, or reconstruct stormwater retention basins.	0.04	1995
Wisconsin	Warren Knowles-Gaylord Nelson Stewardship Program	The Stewardship Program provides a total of \$231 million of state general obligation bonding over 10 years for conservation and recreation related land and easement acquisition and property development. Program funds are used directly by the Wisconsin Department of Natural Resources (DNR) and distributed to local units of government and nonprofit conservation organizations through grants. The program is authorized \$23.1 million each year from fiscal year 1991 to fiscal year 2000, with unspent authority carrying forward into the next fiscal year.	28	1990

	Farmland Preservation Tax Credit	Through a refundable income tax credit, the Farmland Preservation Program provides property tax relief to owners of farmland which meets criteria, including size and use restrictions. In order for a farmland owner to be eligible for the tax credit, the farmland must be located in a county with a farmland preservation plan which identifies farmland to be preserved, environmental areas (e.g., wetlands) and transition areas for future development. The farmland must also be covered by exclusive agricultural zoning or preservation agreement. The landowner must also comply with soil and water conservation standards. If the land is rezoned or removed from a preservation agreement, the landowner is subject to repayment of previous years' credits. Farmland owners received an average credit of \$909 in fiscal year 1998.	20	1977
PLAINS				
Iowa	Habitat Stamp Program	Grants to locals and use by the department of natural resources to purchase and protect land both for habitat as well as wetland restoration.	1.9	N/A
	Resource enhancement and protection	Used for open space land acquisition, state and local recreation area development, soil conservation programs, and historical preservation loans.	13.6	1989
Kansas	Nonpoint Source Pollution Control	Clean Water Act, Section 319, Nonpoint source pollution control grants are used for demonstration projects. Many of these projects have benefited farmers for the activities listed. These funds cannot be utilized as a continuous source of funding for incentive programs. The State Conservation Commission provides and administers the funds in the Kansas Nonpoint Source Pollution Control Fund.	1.2	1990
			0.08	
Missouri	Cost-share	Reimbursement grants to landowners for installing practices, which prevent or control excessive erosion on agricultural land. The practices are designed to maintain soil productivity and prevent continued degradation of water quality of rivers and streams.	22.8	1984
	Loan-interest share	Reimbursement of a portion of the interest paid on private loans used to finance standard erosion control practices, or the purchase of limited conservation tillage	0.35	1986

		equipment.		
	Special Area Land Treatment	Specially designated areas on a watershed basis that use a combination of the cost-share and loan interest-share programs and project grants to address soil and water conservation problems specific to that identified area.	4.38	1986
	Nonpoint Source Animal Waste Projects	Projects to encourage proper animal waste management for operations that are smaller than those requiring permits under federal rules (1,000 animal units or greater).	1	1995
	Missouri Agricultural and Small Business Development Authority SRF loans	Loans to producers for design and construction of animal waste treatment facilities. May also be used for Best Management Practices.	0.78	1995
Nebraska	Buffer Strip Act	LB 1126 of 1998 created the Buffer Strip Act. Fees on pesticide registration are used to provide a monetary incentive for the creation and maintenance of buffer strips.		1998
	Livestock Waste Management Act	LB 1209 of 1998, known as the Livestock Waste Management Act, established a permit process for livestock waste control facilities.		1998
	Wildlife Habitat Improvement Program	Enhancement with local Natural Resource District and landowners designed to create new habitat or enhance existing habitat. Land use payments made to land owners based on habitat improvements made or developed.		1977
	Wildlife Shelterbelt Program	Assist landowners in the establishment of large shelterbelts for wildlife habitats.		1989
	Private Lands Wetland Initiative Program	Program provides financial incentives to encourage the restoration, enhancement, or creation of shallow water wetlands in the state.		1992
	CRP - Management Access	Cooperative program with Pheasants Forever improves habitat for public hunting. Cost-sharing assistance to landowners participating in CRP to improve vegetation/habitat choices for lands enrolled.		1997
	CRP - Upland Habitat Initiative			
North Dakota	N.D. Game and Fisheries	Maintain and enhance fishing opportunities by applying scientific management, research, and culture techniques.	2.5	
	N.D. Game and Fish	To protect and enhance wildlife habitats.	0.5	

	Natural Resources			
	N.D. Game and Fish Wildlife	Habitat development management and enhancement of wildlife management areas	5.4	
South Dakota	Consolidated Water Facilities Construction Fund Program	State Grant Loan Program for Water Resources Projects.	0.21	
	319 Implementation	EPA Federal Pass-Through Grant Program used to implement watershed protection programs. Local sponsors match 40 percent of cost.	1.3	
	604B	Nonpoint Source Development Program. 100% federal funds.	0.02	
SOUTHEAST				
Alabama	Nonpoint Source EPA Grants	EPA nonpoint source grants.	3.3	1997-1998
Arkansas	Nonpoint Source Pollution Abatement	Control water pollution from runoff of animal waste. Program administered by Dept. of Soil and Water. Fund sources are 40 percent state and 60 percent federal.	3	1990
Florida				
Georgia	River Care 2000	State acquisition and protection of important riverfront lands.	5.3	1994
Kentucky	Fish and Wildlife Land Acquisition	Acquire lands for the protection of habitat.	0.5	1986
	Kentucky Heritage Land Conservation Fund	Acquire unique natural areas.	1	1994
	Purchase of agricultural conservation easements (PACE)	Purchases agricultural conservation easements to ensure that lands currently in agricultural use will continue to be available for that purpose.	0.8	1994
	Nonpoint source water quality improvements	Match money for federal grants used to address this problem throughout the state.	1	
Louisiana				
Mississippi				
North Carolina	Nonpoint Source Water Quality, Open Space, Farmland Preservation	Cost share assistance to eligible landowners for the adoption or construction of conservation practices that conserve soil and protect water quality.	11.5	1998
South Carolina	Land, Water and Conservation	Camping Creek/Bush River Agricultural Watershed Project.	0.03	1993
	Land, Water and Conservation	Gills Creek Watershed Project.	0.098	1994
	Land, Water and Conservation	Stevens and Conneross Creek Watershed Project.	0.006	1995
	Land, Water and Conservation	Streambank and Silviculture BMP's Project.	0.029	1996

	Land, Water and Conservation	Agricultural NPS Handbook Publishing and Distribution.	0.058	1997
Tennessee	Agricultural Resources Conservation Fund	Grants Soil Conservation Districts and other conservation organizations to help land owners install best management practices.	2.86	1997
	319 Nonpoint Water Quality	Pass through EPA funds to environmental/conservation organizations for installation, demonstration, and education projects related to nonpoint water quality.	0.86	1997
Virginia	Upland Habitat Assistance	Provide technical assistance to the landowners to the landowners of Virginia, including assistance with Forest Stewardship, Quail restoration, Agricultural liaison, and direct habitat management and prescribed burning assistance.	0.67	1996
	Upland Habitat Assistance	Wetlands habitat creation and restoration projects were completed in cooperation with Ducks Unlimited, U.S. Army Corps of Engineers, and U.S. Fish & Wildlife Service	0.17	1996
	Wildlife Habitat Development	Habitat maintenance and enhancement projects on Department of Game and Inland Fisheries Wildlife Management Areas. Habitat projects support, in optimum condition, populations of indigenous species for public enjoyment.	0.55	1993
	Land Management	Efforts to conserve, protect, develop, and manage land resources.	15.77	
	Preservation of Open-Space Lands	Efforts to acquire, protect, and manage open-space land and designated areas to preserve their natural, scenic, historic, and scientific attributes.	0.33	
	Wetlands and Bottomlands Management	Efforts to protect, preserve, and manage the shoreline ecology for the most appropriate and beneficial uses, and to provide for the proper development of state-owned bottomlands for the protection and betterment of the environment consistent with private and public interests.	0.77	
West Virginia				
SOUTHWEST				
Arizona	Arizona Heritage Fund	Funds used for the acquisition of natural areas.	1.7	1991
	Arizona Game and Fish Heritage Program-Stewardship	Wildlife enhancement projects for private landowners in Arizona.	0.06	1998
	Special Tag Funds-Land Management & Private Ownership	Species-focused habitat enhancement projects.	0.5	1998

	Projects			
	Land Programs	Yuma County-Quigley Pond Wildlife Area (61 acres); Pinal County-Picacho Reservoir (49 acres); Santa Cruz-Gooding Natural Area for Sonora (2,226 acres).	0.03	1998
New Mexico	319 H NPS	319 H Nonpoint Source Implementation provides incentives to farmers, ranchers, and local communities to prevent environmental damage by following best practices in planning and implementation stages of an endeavor.	0.48	
Oklahoma	Forestry Incentive Program	Providing technical assistance for forestry cost-share work for tree planting and timber improvement.	0.02	1974
	Stewardship Incentive Program	Assistance to landowners who sign up for stewardship plans.	0.01	1991
	Conservation Reserve Program	Assistance to landowners who sign up for tree planting practices.	0	1986
ROCKY MOUNTAIN				
Colorado	Nonpoint Water Quality, Open Space and Farmland Preservation		1.2	
Montana	Conservation easements	Initiated in fiscal 2000.	1	
Wyoming	Grants to Conservation Districts		0.17	1989
FAR WEST				
Alaska	Wellhead Protection	Voluntary establishment of protection areas for public water systems using groundwater (in progress). Funded through federal grant.	43	1997
California	Farm Animal Waste Control	Part of water quality program in Water Resources Control Board. Funds are included in Table 14.	0	
	Forest Practices/Forest Management	Enforcement of timber harvest operations; other departments (e.g., Fish and Game, Conservation, State Water Resources Control Board) are also involved but not included in these dollars.	28.2	
	Environmental Review related to Fish and Wildlife	Enforcement of various statutes relating to timber harvesting, water quality, and California Environmental Quality Act that affect the management of the state's fish and wildlife.	18.4	

	Agricultural Land Preservation and Open Space (Williamson Act)	Agricultural land preservation achieved by the Williamson Act; agricultural land preservation achieved by the purchase of easements (Department of Conservation = \$3.4 million; open space subventions (\$34.9 million)).	38.3	
	Habitat Protection	Various departments -- acquisition, restoration, and enhancement of habitats; public access; and operations and maintenance for resource protection.	237.5	
Hawaii				
Nevada				
Oregon	Confined Animal Feeding Operation	Animal waste control program to address requirements of the Clean Water Act.	0.2	1987
	Healthy Streams	State-initiated program for providing an educational and enforceable program to address water pollution from agricultural activities and lands.	2.1	1999
	Soil and Water Conservation District Administrative Support	Provides financial and technical assistance to soil and water conservation districts that work with landowners on nonpoint source water quality improvements and landowner education in natural resource management.	0.4	1987
Washington	State Revolving Fund	Funding from the State Revolving Fund (SRF) is available to fund agricultural Best Management Practices (BMPs) on farms. Agricultural BMPs must provide public benefit. Funds must be administered through a public body such as a Conservation District. SRF is a loan only program (funds must be repaid with interest). Administered by the Department of Ecology.	3.45	1990
	Centennial Clean Water Fund	In some cases grant funding is available for agricultural BMPs. Administered by the Department of Ecology.	0.14	1986
	Dairy Waste Program	Funding is provided to Conservation Districts from the State Conservation Commission to implement dairy waste management plans on farms.	0.9	1993
	Natural Areas Program	Program is a combination of two legislative acts. These two acts are the Natural Preserve Act (1972) and the Natural Resources Conservation Areas Act (1987). These funds are used by the Department of Natural Resources to manage these lands (lands are expanded through gift and trust).	1.4	1987

	Interagency Committee for Outdoor Recreation	The Washington Wildlife and Recreation Program provides funding for habitat and open space acquisition. This includes trails, urban wildlife areas, critical habitat areas, natural areas, state parks, etc.	17	1990
	Interagency Committee for Outdoor Recreation	The Non-highway Off Road Vehicle Program provides funding for off-road vehicle areas acquisition. The Boating Facilities Program provides funding for boat access related acquisition.	0.39	1964 and 1971
TERRITORIES				
Puerto Rico		A program designed to establish irrigation and drainage systems, help improve crop systems and promote public and private farming on the island.	2.27	1996

Summary

According to the survey results, states have independently assumed great financial and administrative responsibilities and are utilizing creativity and innovation as tools for addressing all environmental concerns. Currently, states are addressing an increasing number of environmental issues by successfully implementing federal programs that have been delegated to them, creating state initiated programs, and reacting to positive economic growth patterns. Demand for more state involvement has vastly increased over the years and this trend is predicted to continue well into the future.

Glossary

Air Cleaning: Indoor-air quality-control strategy to remove various airborne particulates and/or gases from the air. Most common methods are particulate filtration, electrostatic precipitation, and gas sorption.

Air Pollutant: Any substance in air that could, in high enough concentration, harm man, other animals, vegetation, or material. Pollutants may include almost any natural or artificial composition of airborne matter capable of being airborne. They may be in the form of solid particles, liquid droplets, gases, or in combination thereof. Generally, they fall into two main groups: (1) those emitted directly from identifiable sources and (2) those produced in the air by interaction between two or more primary pollutants, or by reaction with normal atmospheric constituents, with or without photoactivation. Exclusive of pollen, fog, and dust, which are of natural origin, about 100 contaminants have been identified. Air pollutants are often grouped in categories for ease in classification; some of the categories are: solids, sulfur compounds, volatile organic chemicals, particulate matter, nitrogen compounds, oxygen compounds, halogen compounds, radioactive compound, and odors. Air Pollution: The presence of contaminants or pollutant substances in the air that interfere with human health or welfare, or produce other harmful environmental effects.

Air Toxics: Any air pollutant for which a national ambient air quality standard (NAAQS) does not exist (i.e., excluding ozone, carbon monoxide, PM-10, sulfur dioxide, nitrogen oxide) that may reasonably be anticipated to cause cancer; respiratory, cardiovascular, or developmental effects; reproductive dysfunctions, neurological disorders, heritable gene mutations, or other serious or irreversible chronic or acute health effects in humans.

Clean Air Act: The Clean Air Act is the comprehensive Federal law that regulates air emissions from area, stationary, and mobile sources. This law authorizes the U.S. Environmental Protection Agency to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment.

Corrosive: A chemical agent that reacts with the surface of a material causing it to deteriorate or wear away.

Drinking Water Infrastructure: transmission and distribution systems.

Drinking Water State Revolving Fund: The Fund provides capitalization grants to states to develop drinking water revolving loan funds to help finance system infrastructure improvements, assure source-water protection, enhance operation and management of drinking-water systems, and otherwise promote local water-system compliance and protection of public health.

Hazardous Air Pollutants: Air pollutants which are not covered by ambient air quality standards but which, as defined in the Clean Air Act, may present a threat of adverse human health effects or adverse environmental effects. Such pollutants include asbestos, beryllium, mercury, benzene, coke oven emissions, radionuclides, and vinyl chloride.

Hazardous Waste: By-products of society that can pose a substantial or potential hazard to human health or the environment when improperly managed. Possesses at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity), or appears on special EPA lists.

Ignitable: Capable of burning or causing a fire.

Incinerator: A furnace for burning waste under controlled conditions.

National Ambient Air Quality Standards (NAAQS): Standards established by EPA that apply for outdoor air throughout the country. (See: criteria pollutants, state implementation plans, emissions trading.

National Emissions Standards for Hazardous Air Pollutants (NESHAPS): Emissions standards set by EPA for an air pollutant not covered by NAAQS that may cause an increase in fatalities or in serious, irreversible, or incapacitating illness. Primary standards are designed to protect human health, secondary standards to protect public welfare (e.g., building facades, visibility, crops, and domestic animals).

New Source: Any stationary source built or modified after publication of final or proposed regulations that prescribe a given standard of performance.

Non-delegated programs: Programs that are not derived from federal delegation and law but are initiated by states alone to address immediate environmental concerns.

Non-hazardous Industrial Waste: Industrial process waste in wastewater not considered municipal solid waste or hazardous waste under RARA

Non-Point Sources: Diffuse pollution sources (i.e., without a single point of origin or not introduced into a receiving stream from a specific outlet). The pollutants are generally carried off the land by storm water. Common non-point sources are agriculture, forestry, urban, mining, construction, dams, channels, land disposal, saltwater intrusion, and city streets.

Radiation Standards: Regulations that set maximum exposure limits for protection of the public from radioactive materials.

Safe Drinking Water Act (1974): The Safe Drinking Water Act was established to protect the quality of drinking water in the U.S. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources. The Act authorized EPA to establish safe standards of purity and required all owners or operators of public water systems to comply with primary (health-related) standards. State governments,

which assume this power from EPA, also encourage attainment of secondary standards (nuisance-related).

Superfund: The program operated under the legislative authority of CERCLA and SARA that funds and carries out EPA solid waste emergency and long-term removal and remedial activities. These activities include establishing the National Priorities List, investigating sites for inclusion on the list, determining their priority, and conducting and/or supervising cleanup and other remedial actions.

The Act was amended in 1977 primarily to set new goals (dates) for achieving attainment of NAAQS since many areas of the country had failed to meet the deadlines. The 1990 amendments to the Clean Air Act in large part were intended to meet unaddressed or insufficiently addressed problems such as acid rain, ground-level ozone, stratospheric ozone depletion, and air toxics.

The Clean Water Act: It is a 1977 amendment to the Federal Water Pollution Control Act of 1972, which set the basic structure for regulating discharges of pollutants to waters of the United States. The law gave EPA the authority to set effluent standards on an industry basis (technology-based) and continued the requirements to set water quality standards for all contaminants in surface waters. The CWA makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit (NPDES) is obtained under the Act. The 1977 amendments focused on toxic pollutants. In 1987, the CWA was reauthorized and again focused on toxic substances, authorized citizen suit provisions, and funded sewage treatment plants (POTW's) under the Construction Grants Program.

The goal of the Act was to set and achieve NAAQS in every state by 1975. The setting of maximum pollutant standards was coupled with directing the states to develop state implementation plans (SIP's) applicable to appropriate industrial sources in the state.

The Superfund Amendments and Reauthorization Act (SARA): amends Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) on October 17, 1986. SARA reflected EPA's experience in administering the complex Superfund program during its first six years and made several important changes and additions to the program. SARA stresses the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites, requires Superfund actions to consider the standards and requirements found in other State and Federal environmental laws and regulations, provides new enforcement authorities and settlement tools, increases State involvement in every phase of the Superfund program, increases the focus on human health problems posed by hazardous waste sites, encourages greater citizen participation in making decisions on how sites should be cleaned up, and increased the size of the trust fund to \$8.5 billion.

Transportation Equity Act for the 21st Century: TEA-21 authorizes \$215 billion in budget authority for highway, transit, research and motor carrier programs over the next 6 years (1998-2003).

Toxicity: The degree to which a substance or mixture of substances can harm humans or animals. Acute toxicity involves harmful effects in an organism through a single or short-term exposure. Chronic toxicity is the ability of a substance or mixture of substances to cause harmful effects over an extended period, usually upon repeated or continuous exposure sometimes lasting for the entire life of the exposed organism. Subchronic toxicity is the ability of

the substance to cause effects for more than one year but less than the lifetime of the exposed organism.

Waste Treatment Plant: A facility containing a series of tanks, screens, filters and other processes by which pollutants are removed from water.

Wastewater Infrastructure: The plan or network for the collection, treatment, and disposal of sewage in a community. The level of treatment will depend on the size of the community, the type of discharge, and/or the designated use of the receiving water.

Wastewater: The spent or used water from a home, community, farm, or industry that contains dissolved or suspended matter. **Water Pollution:** The presence in water of enough harmful or objectionable material to damage the water's quality.

Watershed: The land area that drains into a stream; the watershed for a major river may encompass a number of smaller watersheds that ultimately combine at a common point.

Wetlands: An area that is saturated by surface or ground water with vegetation adapted for life under those soil conditions, as swamps, bogs, fens, marshes, and estuaries.

Web Sources

Environmental Protection Agency

<http://www.epa.gov/>

National Governors Association & Center for Best Practices

<http://www.nga.org/>

Office of Management and Budget

<http://w3.access.gpo.gov/usbudget/index.html>

Congressional Budget Office

<http://www.cbo.gov/>

FEDSTATS

<http://www.fedstats.gov/>

Association of State and Interstate Water Pollution Control Administrators (ASIWPCA)

<http://www.asiwpca.org/>

Association of State Drinking Water Administrators (ASDWA)

<http://www.asdwa.org/>

The Environmental Council of the States

<http://www.sso.org/ecos/>

Enviro\$en\$e

<http://es.epa.gov/>



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