

Report to Congressional Requesters

March 2005

FRESHWATER PROGRAMS

Federal Agencies'
Funding in the United
States and Abroad





Highlights of GAO-05-253, a report to congressional requesters

Why GAO Did This Study

As the world's population tripled during the past century, demand for the finite amount of freshwater resources increased six-fold, straining these resources for many countries, including the United States. The United Nations estimates that, worldwide, more than 1 billion people live without access to clean drinking water and over 2.4 billion people lack the basic sanitation needed for human health. Freshwater supply shortages—already evident in the drought-ridden western United States—pose serious challenges and can have economic, social, and environmental consequences.

Multiple federal agencies share responsibility for managing freshwater resources, but consolidated information on the federal government's financial support of these activities is not readily accessible. You asked GAO to determine for fiscal years 2000 through 2004 how much financial support federal agencies provided for freshwater programs in the United States and abroad. For the purposes of this report, freshwater programs include desalination, drinking water supply, flood control, irrigation, navigation, wastewater treatment, water conservation, water dispute management, and watershed management.

www.gao.gov/cgi-bin/getrpt?GAO-05-253.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Anu K. Mittal at (202) 512-3841 or mittala@gao.gov.

FRESHWATER PROGRAMS

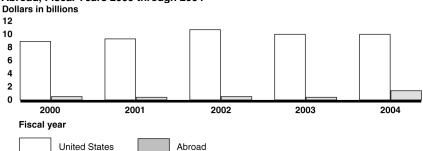
Federal Agencies' Funding in the United States and Abroad

What GAO Found

Of the over \$52 billion in total financial support provided by federal agencies for freshwater programs during fiscal years 2000 through 2004, about \$49 billion was directed to domestic programs and about \$3 billion supported programs abroad. Domestic program activities involved 27 federal agencies, but 3 agencies—the Environmental Protection Agency, the Army Corps of Engineers, and the Department of Agriculture's (Agriculture) Rural Utilities Service—accounted for over 70 percent of the financial support. Eighteen agencies supported domestic drinking water supply programs and 16 supported domestic wastewater treatment and watershed management programs. Grant programs of over \$22 billion and direct federal spending of about \$22 billion accounted for most of the domestic financial support. In addition to the about \$49 billion that directly support freshwater activities in the United States, some agencies also have programs that may indirectly support such activities, but it is difficult to determine the dollar value of this indirect support. For example, Agriculture's Conservation Reserve Program supports multiple activities, including irrigation, but information on each activity supported by the program is not readily available. Also included in the domestic program is about \$175 million that the United States provided to three commissions that conduct freshwater activities along U.S. borders with Mexico and Canada.

Of the estimated \$3 billion in total financial support directed toward freshwater programs abroad between fiscal years 2000 through 2004, about \$1 billion was recently provided for freshwater projects in Afghanistan and Iraq. Most of the financial support for international freshwater programs was provided by the U.S. Agency for International Development. Foreign wastewater treatment and watershed management programs were the ones that most of the agencies supported. The vast majority of the U.S. support for international programs was provided through grants. Not included in the \$3 billion for international support are the contributions that the United States made to the general budgets of numerous international organizations, such as the United Nations and the World Bank. The international organizations used some portion of the U.S. contributions to support freshwater activities around the globe.

Federal Agencies' Estimated Obligations for Freshwater Programs in the United States and Abroad, Fiscal Years 2000 through 2004



Source: GAO survey of federal agencies' freshwater programs.

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United States Government Accountability Office Washington, D.C. 20548

March 11, 2005

The Honorable George Radanovich Chairman, Subcommittee on Water and Power Committee on Resources House of Representatives

The Honorable Ken Calvert House of Representatives

As the world's population tripled during the past century, demand for accessible freshwater—which makes up less than 1 percent of the earth's water—increased six-fold, straining freshwater resources for many countries, including the United States. In the United States, with increasing demand for the finite amount of freshwater available, large portions of the country could face water shortages in the next few decades. Freshwater supply shortages—already evident in the drought-ridden West—pose serious challenges and can have significant economic, social, and environmental consequences. Water shortages reduce farmland and forest productivity and damage plant and animal species, wildlife habitat, and air and water quality. In addition, water shortages can create potential disputes between various water users, managers, and government entities. Ensuring future water supplies to meet these various and sometimes competing needs may require significant investments. For example, the Environmental Protection Agency (EPA) estimated that utilities would need to invest over \$150 billion just to repair, replace, and upgrade the nation's drinking water infrastructure over the next two decades.

Freshwater supply issues are not unique to the United States—by 2025, one-third of the world's population is likely to live in countries facing freshwater shortages. The United Nations highlighted these concerns when it declared 2003 as the International Year of Freshwater. In addition, it estimates that, worldwide, more than 1 billion people live without access to clean drinking water, and that over 2.4 billion people lack the basic sanitation needed for human health. Furthermore, the Secretary-General notes that water-related diseases are responsible for 80 percent of all illnesses and deaths in developing countries. Finally, the World Bank estimates that countries will need to double the \$70 billion to \$80 billion they currently invest annually to provide clean drinking water and basic sanitation for the world's population. To help address these global

challenges, the United States contributes financial support to foreign countries and international organizations for various freshwater projects.

Multiple federal agencies share responsibility for managing freshwater resources. Agencies provide services through direct federal spending or financial assistance through grant, loan, and loan guarantee programs to other parties. Direct federal spending includes payments that agencies make for services provided by federal employees and federal contracts for freshwater programs in the United States and abroad. Freshwater programs include, among other things, desalination, drinking water supply, flood control, irrigation, navigation, wastewater treatment, water conservation, water dispute management, and watershed management activities. Additionally, the United States makes financial contributions to several binational commissions that support freshwater projects along U.S. borders and to international organizations, such as the World Bank and the United Nations, that support freshwater projects around the world. However, consolidated information on the federal government's financial support of freshwater programs in the United States and abroad does not currently exist. This information is not readily accessible because definitions of freshwater programs and the availability of financial data vary across agencies.

In this context, you asked us to determine for fiscal years 2000 through 2004 how much financial support federal agencies provided for freshwater programs in the United States and abroad.

To address these objectives, we identified federal agencies that support freshwater programs in the United States and abroad by reviewing Congressional Research Service, GAO, and United Nations reports and the Catalog of Federal Domestic Assistance. We conducted initial interviews with officials from the agencies we identified to confirm that the agencies provided financial support for these programs during fiscal years 2000 through 2004 and focused our efforts on those agencies responsible for the majority of the federal financial support. We used a questionnaire to gather detailed information from agencies that track freshwater expenditures. In this report, we have only included data on the financial support that agencies provided specifically for the following freshwater programs:

¹In this report, the term "agency" represents executive departments, subagencies, or offices of executive departments, and independent agencies or commissions (such as EPA or the Appalachian Regional Commission).

desalination, drinking water supply, flood control, irrigation, navigation, wastewater treatment, water conservation, water dispute management, and watershed management. We did not include financial support for programs that may indirectly provide financial support for freshwater projects because information on these programs' freshwater activities is not tracked separately. As a result, the financial information in this report is an estimate of the minimum amount of funds agencies provided for freshwater programs. In addition, although we requested program-level financial information, we opted to present this information at the agency-level because agencies' definitions of freshwater programs vary. We conducted follow-up interviews with respondents to confirm the information and to clarify the information they provided, if necessary. A more detailed description of our scope and methodology is presented in appendix I. We performed our work between March 2004 and January 2005, in accordance with generally accepted government auditing standards.

Results in Brief

Of the estimated \$52 billion in total financial support provided in the United States and abroad for freshwater programs during fiscal years 2000 through 2004, about \$49 billion came from 27 federal agencies specifically for domestic programs. Three agencies—EPA, the Army Corps of Engineers (Corps), and the Department of Agriculture's (Agriculture) Rural Utilities Service—accounted for over 70 percent of the total federal support for domestic programs. Domestic drinking water supply programs received support from 18 agencies. Agencies provided most of the domestic financial support through grant programs and direct federal spending, over \$22 billion and about \$22 billion, respectively. We also identified domestic programs that may provide financial support for freshwater activities, but are not included in the \$49 billion because supporting freshwater activities is not the programs' primary purpose and the amounts spent on freshwater activities could not be readily identified. Also included in the domestic program is about \$175 million that the United States provided to three binational commissions to support freshwater activities along both sides of the U.S. borders during fiscal years 2000 through 2004.

Federal agencies provided an estimated \$3 billion in federal financial support for freshwater programs abroad during fiscal years 2000 through 2004. Of the about \$3 billion in total international funding, the U.S. Agency for International Development (USAID) and the Department of Defense (Defense) provided about \$1 billion for freshwater projects in Afghanistan and Iraq during fiscal years 2002 through 2004. USAID accounted for the majority of the international support. International wastewater treatment

and watershed management programs received the most U.S. support. Agencies provided most of the support through grants. Some federal agencies, such as the Department of the Interior's (Interior) Bureau of Reclamation (Reclamation) and the Corps, conducted work on freshwater projects in foreign countries, but funding for these projects also originated from USAID and the Department of State (State). In addition to providing financial support directly for freshwater programs abroad, the United States indirectly supports such programs through its contributions to numerous international organizations, such as the World Bank.

Background

The federal government supports multiple freshwater programs in the United States and abroad. Although agencies vary in how they describe their freshwater programs (activities, projects, or initiatives), the following terms generally describe the freshwater efforts covered in this review:

- *Desalination*—Activities and/or infrastructure related to the process of removing salts from saline water to provide freshwater.
- *Drinking water supply*—Activities and/or infrastructure designed to improve access to and quality and availability of clean drinking water.
- *Flood control*—Activities related to dredging, hydrologic forecasting, and the construction, operation, and maintenance of infrastructure designed to reduce flood damage.
- Irrigation—Activities and/or infrastructure related to the diversion, distribution, delivery, and drainage of water for agricultural purposes.
- *Navigation*—Activities and/or infrastructure related to dredging and the construction, operation, and maintenance of infrastructure (e.g., locks, channels, and dams), primarily for river-based transportation.
- Wastewater treatment—Activities and/or infrastructure designed to manage and treat storm water and domestic and/or industrial wastewater.
- Water dispute management—Adjudication, litigation, and negotiation activities to prevent or resolve water-related disputes, including water settlement payments.

- Water conservation—Activities and/or infrastructure designed to reclaim, recycle, and/or reuse potable or nonpotable water.
- Watershed protection, restoration, and management (watershed management)—Activities and/or infrastructure related to nonpoint source pollution prevention, wetlands restoration, and land-based activities related to source water protection and coastal zone management.

Federal agencies provide financial support for freshwater programs through direct federal spending and grant, loan, and loan guarantee programs. For the purposes of this report, direct federal spending is a general term used to describe, among other things, work performed by federal employees or through contracts with private and nongovernmental entities on the federal government's behalf. For example, direct federal spending includes the financial support spent by federal agencies for, among other things, the construction of reservoirs for flood control and irrigation. Grants, loans, and loan guarantees are different types of financial assistance programs provided by federal agencies to help communities with projects, such as construction of water and wastewater treatment facilities. In addition to providing financial support on the direct costs of freshwater programs, such as capital construction and operations and maintenance costs, agencies also provide funds for technical assistance and research and development efforts.

Agencies rely on several sources of funding—including annual appropriations from the general fund and from dedicated funding sources, such as trust funds—to provide financial support for these programs. Agencies obligate these funds for multiple purposes as they implement their programs. Obligations represent amounts for orders placed, contracts awarded, services received, and similar transactions during a given period that will require payments during the same or a future period. Obligations differ from expenditures in that an expenditure is the issuance of a check, disbursement of cash, or electronic transfer of funds made to liquidate an obligation. In addition, in some circumstances expenditures fulfilling an obligation may occur during subsequent years. Consequently, obligations provide the best estimate of what an agency plans to spend during a fiscal year.

The extent to which agencies track their freshwater efforts vary. Agencies tend to track the financial support they provide to large freshwater programs, such as EPA's Drinking Water State Revolving Fund. Some

programs, such as Agriculture's Conservation Reserve Program, serve multiple purposes and specific program components, such as irrigation activities, are not specifically tracked. Similarly, freshwater projects (e.g., a dam) can serve multiple purposes, providing benefits such as water storage, flood control, and generation of hydroelectric power. The financial support provided for the overall project cost is generally available, but the costs for specific components of the project are not readily available. In addition, definitions of freshwater programs can vary depending on the agency's role. An agency that is responsible for maintaining portions of the nation's waterways may include lock infrastructure and waterway operations and maintenance activities in its navigation program; however, other agencies, which are responsible for research and development of freshwater resources, may include stream flow and sedimentation research within their navigation programs. Because of these differences, agencies may not be tracking their freshwater expenditures consistently across agencies. As such, financial information reported by the agencies on the federal government's financial support of freshwater programs in the United States and abroad is an estimate of the minimum amount of funds provided for these efforts.

Federal Agencies Provided an Estimated \$49 Billion for Domestic Freshwater Programs during Fiscal Years 2000 through 2004 Of the 27 agencies that provided about \$49 billion in federal financial support specifically for freshwater programs in the United States during fiscal years 2000 through 2004, 3 agencies accounted for over 70 percent of the total. EPA provided about 31 percent of the total support, the Corps accounted for about 26 percent of the total, and Agriculture's Rural Utilities Service accounted for about 16 percent of the total. See table 1 for more information on the federal financial support provided for domestic freshwater programs.

²The Rural Utilities Service is one of several subagencies within Agriculture's Rural Development agency.

Table 1: Federal Agencies' Estimated Financial Support for Domestic Freshwater Programs, Fiscal Years 2000 through 2004

Dollars in millions						
			Fiscal y	ear		
Department or agency	2000	2001	2002	2003	2004	Total
Agriculture						
Agricultural Research Service	\$87.9	\$98.9	\$103.9	\$114.0	\$119.1	\$523.8
Cooperative State Research, Education, and Extension						
Service	27.7	31.1	33.3	39.7	41.1	172.9
Economic Research Service	1.0	1.0	1.0	0.9	0.8	4.7
Farm Service Agency ^a	0.0	0.1	13.2	5.9	5.4	24.6
Forest Service ^b	59.0	52.1	59.3	62.1	59.0	291.5
Natural Resources Conservation Service	270.3	259.1	403.1	473.7	445.9	1,852.0
Rural Utilities Service	1,311.1	1,340.5	2,065.4	1,388.8	1,471.7	7,577.4
Subtotal	\$1,756.9	\$1,782.7	\$2,679.1	\$2,085.1	\$2,142.9	\$10,446.7
Commerce						
Economic Development Administration	\$56.9	\$87.1	\$59.3	\$56.4	\$77.8	\$337.5
National Oceanic and Atmospheric Administration ^c	35.2	36.3	41.7	42.5	46.6	202.3
Subtotal	\$92.1	\$123.4	\$101.0	\$98.9	\$124.3	\$539.8
Defense						
Army Corps of Engineers ^d	\$2,485.8	\$2,614.0	\$2,656.9	\$2,702.6	\$2,450.9	\$12,910.2
Army Material Command	0.2	1.3	3.4	6.0	9.5	20.4
Office of Naval Research	0.8	1.2	0.7	7.2	7.0	16.8
Subtotal	\$2,486.8	\$2,616.5	\$2,661.0	\$2,715.8	\$2,467.4	\$12,947.4
Energy ^e	\$4.2	\$1.5	\$3.7	\$0.3	\$7.7	\$17.3
Health and Human Services						
Administration for Children and Families	\$5.1	\$5.3	\$6.6	\$6.6	\$7.2	\$30.7
Indian Health Service	91.2	91.5	90.8	88.0	92.7	454.2
Subtotal	\$96.3	\$96.8	\$97.4	\$94.5	\$99.9	\$484.9
Housing and Urban Development						
Office of Community Planning and Development ^f	\$275.8	\$478.9	\$552.9	\$528.9	\$424.4	\$2,260.9
Interior						
Bureau of Indian Affairs	\$71.5	\$74.5	\$88.3	\$89.2	\$67.1	\$390.7
Bureau of Land Management	47.2	52.7	61.6	71.1	80.7	313.3
Bureau of Reclamation ⁹	692.7	637.2	802.2	739.7	788.8	3,660.6
Fish and Wildlife Service ^h	40.6	136.4	154.1	147.2	174.7	653.0
National Park Service ⁱ	65.2	30.5	69.9	34.6	27.3	227.4

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Dollars in millions								
	Fiscal year							
Department or agency	2000	2001	2002	2003	2004	Total		
U.S. Geological Survey	196.6	212.3	216.6	218.0	225.8	1,069.3		
Subtotal	\$1,113.9	\$1,143.5	\$1,392.8	\$1,299.7	\$1,364.4	\$6,314.4		
Transportation								
Federal Highway Administration ^j	\$24.4	\$27.9	\$17.5	\$26.2	\$20.2	\$116.2		
Saint Lawrence Seaway Development Corporation ^k	12.0	13.0	13.3	14.0	14.3	66.5		
Subtotal	\$36.4	\$40.9	\$30.8	\$40.2	\$34.5	\$182.7		
Independent agency								
Appalachian Regional Commission	\$23.6	\$30.7	\$22.7	\$24.4	\$23.9	\$125.2		
EPA	2,987.4	3,012.4	3,135.2	3,085.3	3,132.8	15,353.1		
National Science Foundation	14.3	18.5	18.3	27.7	33.2	112.0		
Subtotal	\$3,025.3	\$3,061.6	\$3,176.2	\$3,137.4	\$3,190.0	\$15,590.4		
Total	\$8,887.6	\$9,345.9	\$10,694.7	\$10,000.9	\$9,855.4	\$48,784.5		

Source: GAO survey of federal agencies' freshwater programs.

Note: Other agencies, such as the Federal Emergency Management Agency and Small Business Administration, may also provide financial support for these programs. In addition, the Department of the Treasury's Judgment Fund paid out over \$41 million in fiscal year 2003 and over \$3 million in fiscal year 2004 as part of the settlement of a dispute related to the Central Valley Project, a large water project in California. Sumner Peck Ranch Inc. v. Bureau of Reclamation, No. CV-F-91-048 OWW (E.D. Cal). An additional payment of over \$64 million was paid out in fiscal year 2005. The figures in the table are reported as obligations, appropriations, or expenditures in current dollars. Unless otherwise noted, figures refer to obligations. All totals were calculated prior to rounding to the nearest million. Totals may not equal the sums of the yearly amounts due to rounding.

^aThese figures are for the Farmable Wetlands Program that began as a pilot program in fiscal year 2001. The figures are an estimate of the amount of federal dollars (rental and other payments) paid to landholders to convert farmlands into wetlands. According to a senior agency official, these figures can be used as a proxy for obligations.

^bThese figures are appropriations. According to a senior agency official, the agency obligates the entire relevant appropriation each fiscal year.

^cThese figures only include selective programs from the National Weather Service and Oceanic and Atmospheric Research offices.

^dThese figures only include the Civil Works program and are primarily in obligations. Figures for one program were reported in expenditures. According to a senior agency official, the agency obligates the entire relevant appropriation for this program each fiscal year.

^eThe Department of Energy is counted by itself because no separate agencies were identified within the department that provided financial support for freshwater programs.

^fThese figures are actual disbursements.

^gThese figures only include the agency's Water and Related Resources budget and some nonfederal dollars, such as funds provided by local governmental entities, which were used to supplement the agency's annual budget. The agency could not readily break out funds provided by the nonfederal dollars.

^hThese figures only include selective programs from the Division of Bird Habitat Conservation and the Division of Federal Assistance. The agency modified its data management system in 2001, which

improved its ability to track freshwater programs. Financial support provided in fiscal year 2000 is incomplete because the information was not readily available.

ⁱThese figures include the agency's Water Resources Division's budget along with water-related activities at the Everglades and Olympic National Parks. Financial support provided to other parks for freshwater programs were not readily available.

^jThese figures only include costs related to mitigation of water pollution due to highway runoff.

^kThese figures are appropriations. According to a senior agency official, the agency obligates the entire relevant appropriation each fiscal year.

These figures are actual grant approval amounts.

Each of the agency's financial support of freshwater programs generally reflects the nature of its mission. EPA—as the agency responsible for protecting the nation's waters through enforcing clean water and safe drinking water laws, providing support for municipal wastewater treatment plants, and protecting watersheds and sources of drinking water—provides substantial financial support for freshwater programs. On the other hand, the Department of Health and Human Services' (Health) Administration of Children and Families—an agency responsible for federal programs that seek to promote economic and social well-being—administers a grant program dedicated to helping rural, low-income communities with their water and wastewater systems and provides a relatively small amount of financial support. In addition, agencies, such as Agriculture's Rural Utilities Service, the Department of Commerce's (Commerce) Economic Development Administration, Health's Indian Health Service, the Department of Housing and Urban Development's (Housing) Office of Community Planning and Development, and EPA, that assist communities with the development of drinking water supply and wastewater treatment facilities provide far more financial support than agencies, such as Agriculture's Cooperative State Research, Education, and Extension Service and Defense's Army Material Command and Office of Naval Research, that primarily support research and development efforts.

Agencies generally receive annual appropriations from the general fund to support their domestic freshwater programs. In addition to annual appropriations, 4 agencies—Agriculture's Rural Utilities Service, the Corps, Defense's Office of Naval Research, and the Appalachian Regional Commission—received funds from supplemental appropriations. The Department of Transportation's (Transportation) Federal Highway Administration and Saint Lawrence Seaway Development Corporation received the majority of their annual budgets from dedicated funding sources available subject to appropriations (the Highway Trust Fund and the Harbor Maintenance Trust Fund, respectively). In addition, 4 other agencies—Agriculture's Farm Service Agency and Natural Resources

Conservation Service, the Corps, and Interior's

Reclamation—supplemented their annual budgets with dedicated funding sources available subject to appropriation. The Agriculture agencies received funds from the Commodity Credit Corporation, while the Corps and Interior's Reclamation received funding from trust funds. Finally, certain agencies, including Interior's Reclamation and Fish and Wildlife Service and Agriculture's Rural Utilities Service, received funds from dedicated funding sources available without further appropriation. For example, Interior's Reclamation received funds from the Lower Colorado River Basin Development Fund to finance the operation and maintenance of freshwater infrastructure in the Colorado River Basin for, among other things, drinking water supply, flood control, and irrigation efforts.

Domestic drinking water supply and wastewater treatment programs were supported by 18 and 16 agencies, respectively. Agriculture's Rural Utilities Service, Commerce's Economic Development Administration, Health's Indian Health Service, Housing's Office of Community Planning and Development, and EPA primarily supported activities related to the development of drinking water supply and wastewater treatment infrastructure, and some of the other agencies mostly provided technical assistance and/or research and development assistance, such as water quality and water availability research. Sixteen agencies supported a variety of watershed management programs. While 7 agencies provided financial support for navigation programs, the Corps and Transportation's Saint Lawrence Seaway Development Corporation provided the majority of the support for, among other things, operations and maintenance of the nation's waterways. See table 2 for more information on the domestic freshwater programs these agencies supported.

Table 2: Federal Agencies' Domestic Freshwater Programs, Fiscal Years 2000 through 2004

	Freshwater program											
Department or agency	Desalination	Drinking water supply	Flood	Irrigation	Navigation	Waste- water treatment	Water dispute management	Water conservation	Watershed management			
Agriculture												
Agricultural Research Service			Х	Х				х	Х			
Cooperative State Research, Education, and Extension Service	x	X		X	X	X	X	X	X			
Economic Research Service				Х				Х	X			
Farm Service Agency									Х			
Forest Service							X		X			
Natural Resources Conservation Service			X	X				X	X			
Rural Utilities Service		Х				Х						
Commerce												
Economic Development Administration		Х	Х	X		X						
National Oceanic and Atmospheric Administration		x	Х		Х			X	x			
Defense												
Army Corps of Engineers	Х	Х	Х	Х	Х	Х		Х	Х			
Army Material Command	Х	Х				Х		Х				
Office of Naval Research	Х	Х				X			_			
Energy ^a	Х	Х	Х			Х						

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	Freshwater program											
Department or agency	Desalination	Drinking water supply	Flood control	Irrigation	Navigation	Waste- water treatment	Water dispute management	Water conservation	Watershed management			
Health and Human Services												
Administration for Children and Families		Х				Х						
Indian Health Service		Х				Х						
Housing and Urban Development												
Office of Community Planning and Development		X	Х			X						
Interior												
Bureau of Indian Affairs		Х	Х	Х		Х	Х					
Bureau of Land Management							Х		Х			
Bureau of Reclamation	Х	Х	Х	Х		Х	Х	Х	Х			
Fish and Wildlife Service									X			
National Park Service		х					Х		Х			
U.S. Geological Survey	X	Х	Х	Х	X	x	Х	Х	X			
Transportation												
Federal Highway Administration									X			
Saint Lawrence Seaway Development Corporation					Х							

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					Freshwater	program				
Department or agency	Desalination	Drinking water supply	Flood control	Irrigation	Navigation	Waste- water treatment	Water dispute management	Water conservation	Watershed management	
Independent agency										
Appalachian Regional Commission		Х	Х		X	Х				
EPA		Х				Х			Х	
National Science Foundation	Х	Х	Х	Х	х	Х		Х	X	
Total	8	18	12	10	7	16	7	10	16	

Source: GAO survey of federal agencies' freshwater programs.

Note: The programs noted above only include programs that contributed to the agencies' financial support in table 1. Agencies may support additional freshwater programs.

^aThe Department of Energy is counted by itself because no separate agencies were identified within the department that provided financial support for freshwater programs.

Agencies used several different funding mechanisms to provide financial support for domestic freshwater programs. Twenty of the 27 agencies reported that they used direct federal spending to provide financial support for freshwater programs. For the purposes of our review, we define direct federal spending to include (1) work carried out by federal employees, contractors, and private and nongovernmental organization sectors for the federal government; (2) the federal government's portion of federal cost-share programs; and (3) funds provided from one agency to another agency to conduct work. Thirteen agencies used grant programs, and 2 agencies each used loan and loan guarantee programs. Many agencies used a combination of funding mechanisms to provide financial support for freshwater programs. See table 3 for more information on funding mechanisms used by agencies to provide financial support for freshwater programs in the United States.

Table 3: Funding Mechanisms Used by Agencies to Provide Financial Support for Domestic Freshwater Programs, Fiscal Years 2000 through 2004

Funding mechanism	Department	Agency that provided financial support
Direct federal spending	Agriculture	 Agricultural Research Service Economic Research Service Farm Service Agency Forest Service Natural Resources Conservation Service
	Commerce	National Oceanic and Atmospheric Administration
	Defense	Army Corps of EngineersArmy Material Command
	Health and Human Services	Indian Health Service
	Interior	Bureau of Indian AffairsBureau of Land ManagementNational Park Service
	Transportation	Federal Highway AdministrationSaint Lawrence Seaway Development Corporation
Grant programs	Commerce	Economic Development Administration
	Health and Human Services	Administration for Children and Families
	Housing and Urban Development	Office of Community Planning and Development
	Independent Agencies	 Appalachian Regional Commission EPA^a National Science Foundation
Direct federal spending and grant programs	Agriculture	Cooperative State Research, Education, and Extension Service
	Defense	Office of Naval Research
	Energy ^b	
	Interior	Fish and Wildlife Service U.S. Geological Survey
Direct federal spending, and grant, loan, and loan guarantee programs	Interior	Bureau of Reclamation ^c
Grant, loan, and loan guarantee programs	Agriculture	Rural Utilities Service
	Source: GAO survey of federal agencies' freshwater programs.	

Note: The funding mechanisms noted above only include mechanisms used to disburse agencies' financial support reported in table 1. Agencies may use additional funding mechanisms.

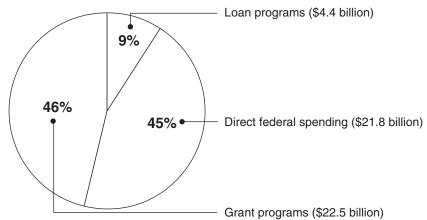
^aEPA grants are primarily used to fund the Drinking Water and Clean Water State Revolving Funds. These revolving funds make loans to municipalities.

^bThe Department of Energy is counted by itself because no separate agencies were identified within the department that provided financial support for freshwater programs.

°In fiscal year 2002, the agency dissolved its loan guarantee program.

Grant programs and direct federal spending provided over \$22 billion and about \$22 billion, respectively, for domestic freshwater programs. Loan programs provided over \$4 billion, and loan guarantee programs provided over \$90 million in initial obligations. Initial obligations are the amount agencies obligated for the subsidy cost when a loan guarantee was made. They do not include subsequent reestimates. See figure 1 for the financial support provided by each funding mechanism.

Figure 1: Financial Support Provided by Each Funding Mechanism for Domestic Freshwater Programs, Fiscal Years 2000 through 2004



Source: GAO survey of federal agencies' freshwater programs.

Note: In addition to these funding mechanisms, about 0.2 percent (\$90.3 million) of the total financial support for domestic freshwater programs was provided through loan guarantee programs.

The \$49 billion for domestic freshwater programs includes funding provided from one agency to another to conduct freshwater activities in the United States. For example, the Corps received financial support from EPA to conduct watershed management activities. We included funding for this effort in the financial information reported by EPA. See table 4 for examples of agencies that performed work on freshwater activities in the United States using financial support provided to them by other agencies.

Table 4: Examples of Agencies' Domestic Freshwater-Related Activities That Were Supported by Other Agencies, Fiscal Years 2000 through 2004

Agency conducting the work	Agency that provided financial support	Examples of freshwater-related activities		
Agriculture				
Agricultural Research Service	Agriculture agenciesDefense agenciesInterior agenciesEPA	Irrigation, flood control, water conservation, and watershed management		
Rural Utilities Service	Commerce's Economic Development AdministrationAppalachian Regional Commission	Drinking water supply and wastewater treatment		
Commerce				
Economic Development Administration	Defense's Office of Economic Adjustment Appalachian Regional Commission	Drinking water supply, wastewater treatment, irrigation, and flood control		
National Oceanic and Atmospheric Administration	Army Corps of EngineersInterior's U.S. Geological Survey	Drinking water supply, water conservation, watershed management, and flood control		
Defense				
Army Corps of Engineers	Agriculture agenciesDefense agenciesInterior agenciesEPA	Flood control, navigation, and watershed management		
Health and Human Services				
Indian Health Service	• EPA	Drinking water supply and wastewater treatment		
Housing and Urban Development				
Office of Community Planning and Development	Appalachian Regional Commission	Drinking water supply, wastewater treatment, and flood control		
Interior				
Bureau of Reclamation	 Agriculture's Natural Resources Conservation Service Commerce's National Oceanic and Atmospheric Administration Defense agencies Energy Interior agencies EPA 	Drinking water supply, flood control, irrigation, wastewater treatment, and watershed management		
U.S. Geological Survey	Defense agenciesInterior agenciesEnergyEPA	Drinking water supply and watershed management		
Independent agency				
EPA	Agriculture agenciesArmy Corps of Engineers	Drinking water supply and watershed management		

Source: GAO survey of federal agencies' freshwater programs.

We also identified domestic programs that may provide financial support for freshwater activities, but are not included in the \$49 billion because supporting freshwater activities is not the programs' primary purpose and activity-level data is not readily available. For example, Housing's Office of Community Planning and Development administers a loan guarantee program that may provide financial support for water infrastructure projects, but aggregate information on the use of loan guarantee authority for particular categories of activities is not readily available. Consequently, financial support provided by these types of programs is not included in table 1. Other agencies also have these types of programs that may support freshwater-related activities: Agriculture's Farm Service Agency, Forest Service, and Rural Utilities Service; Commerce's Economic Development Administration: Interior's Fish and Wildlife Service: the Appalachian Regional Commission; and EPA. Furthermore, while these 27 agencies provided the majority of the federal financial support for freshwater programs in the United States, other agencies may also provide financial support for these types of programs. Appendix II provides information on some other agencies and programs that can provide financial support for freshwater-related activities. These agencies provide financial assistance primarily for specific regions of the United States and/or support a variety of programs, including freshwater-related activities.

In the domestic support for freshwater programs, we also identified the United States' financial contributions to three binational commissions—Border Environment Cooperation Commission, International Boundary and Water Commission, and International Joint Commission. These commissions support a variety of projects on both sides of the U.S. borders with Canada and Mexico.³ Typically, these commissions coordinate their efforts with EPA and/or State and are able to track how U.S. contributions are used to support their freshwater activities. Together, the three commissions used about \$175 million in U.S. contributions to support a number of freshwater projects during fiscal years 2000 through 2004. For the purposes of our review, we include information on U.S. contributions to these commissions in the same section as the information for domestic freshwater programs because these projects are joint efforts among the United States, Canada, and Mexico

³For the International Boundary and Water Commission, the United States funds only the expenses of the U.S. section of the commission. In addition, the United States may provide financial contributions to other commissions, such as the North American Commission for Environmental Cooperation, which may fund freshwater projects that benefit the United States, Canada, and/or Mexico.

along the shared borders; however, information on funding spent solely in the United States by the commissions is not readily available. Table 5 presents information on total U.S. contributions to these commissions for freshwater projects. See appendix II for more information on these commissions.

Table 5: U.S. Financial Contributions Used to Support Freshwater Projects along Both Sides of the U.S. Borders, Fiscal Years 2000 through 2004

Oollars in millions									
	Fiscal year								
Commission	2000	2001	2002	2003	2004	Total			
Border Environment Cooperation Commission	\$3.1	\$2.9	\$5.4	\$2.4	\$1.6	\$15.4			
International Boundary and Water Commission	25.9	30.3	31.1	31.7	32.1	151.1			
International Joint Commission ^a	0.0	1.5	2.9	2.3	1.5	8.1			
Total	\$29.0	\$34.6	\$39.3	\$36.4	\$35.2	\$174.6			

Sources: Department of State and commission officials.

Note: These figures are estimates of obligations in current dollars. All totals were calculated prior to rounding to the nearest million. Totals may not equal the sums of the yearly amounts due to rounding.

Federal Agencies Provided an Estimated \$3 Billion for Freshwater Programs Abroad during Fiscal Years 2000 through 2004 Of the about \$3 billion of U.S. financial support provided internationally for freshwater programs during fiscal years 2000 through 2004, an estimated \$2 billion was spent throughout most of the world, and more recently another \$1 billion supported freshwater projects in Afghanistan and Iraq. In addition to the financial assistance provided directly by federal agencies for freshwater programs abroad, the United States also indirectly supports these programs through its contributions to numerous international organizations, such as the World Bank and the United Nations.

Eight Federal Agencies Provided Financial Support for Programs throughout the World Eight federal agencies obligated an estimated \$2 billion during fiscal years 2000 through 2004 for freshwater activities abroad, excluding Afghanistan and Iraq. USAID accounted for over 90 percent of the \$2 billion. Interior's Fish and Wildlife Service provided about 6 percent; Agriculture's Foreign Agricultural Service and the U.S. Trade and Development Agency (an independent federal agency) each accounted for around 1 percent. The

^aThe commission did not support any freshwater projects in fiscal year 2000.

remaining 4 agencies (State, the Corps, the African Development Foundation, and the National Science Foundation) together provided about 1 percent of the support. See table 6 for information on the federal financial support provided for freshwater programs abroad, excluding aid provided to Afghanistan and Iraq.

Table 6: Federal Agencies' Estimated Financial Support for Freshwater Programs Abroad, Excluding Afghanistan and Iraq, Fiscal Years 2000 through 2004

Dollars in thousands							
	Fiscal year						
Department or agency	2000	2001	2002	2003	2004	Total	
Agriculture							
Foreign Agricultural Service	\$57	\$4,213	\$2,875	\$396	\$19,303	\$26,844	
Defense							
Army Corps of Engineers ^a	28	100	100	200	100	528	
Interior							
Fish and Wildlife Service	18,363	29,799	30,067	26,446	24,033	128,708	
State	1,693	1,950	2,000	2,865	200	8,708	
Independent agency							
African Development Foundation	55	102	393	30	279	859	
National Science Foundation	100	112	126	222	146	706	
U.S. Agency for International Development	432,004	339,310	372,592	344,746	331,486	1,820,137 ^b	
U.S. Trade and Development Agency	4,115	7,616	9,214	4,769	2,932	28,645	
Total	\$456,414	\$383,201	\$417,367	\$379,673	\$378,479	\$2,015,134	

Source: GAO survey of federal agencies' freshwater programs.

Note: Some of the agencies primarily provide financial support on a project-by-project basis. Consequently, total financial support may vary from year-to-year. Other agencies, such as the Inter-American Foundation, may also provide financial support for these programs. The figures in the table are reported as obligations in current dollars. All totals were calculated prior to rounding to the nearest thousand. Totals may not equal the sums of the yearly amounts due to rounding.

For international support on freshwater programs abroad, agencies generally receive annual appropriations from the general fund to support their freshwater programs. Some freshwater programs, such as those at Interior's Fish and Wildlife Service, are also supported by permanent or dedicated funding sources, which remain available without further appropriation. Agriculture's Foreign Agricultural Service receives funds for

^aThese figures only include the Civil Works program.

^bThis total includes contributions provided to the Consultative Group on International Agricultural Research during fiscal years 2000 through 2004 for irrigation and watershed management projects.

its freshwater programs from the Commodity Credit Corporation (a dedicated funding source at Agriculture subject to congressional appropriation).

Seven of the 8 agencies reported that they provided financial support for wastewater treatment and watershed management programs abroad. In addition, 6 agencies each provided financial support for drinking water supply and irrigation programs. See table 7 for information on the freshwater programs supported by federal agencies abroad.

Table 7: Federal Agencies' Freshwater Programs Abroad, Excluding Afghanistan and Iraq, Fiscal Years 2000 through 2004

				Freshwa	ter program				
Department or agency	Desalination	Drinking water supply	Flood control	Irrigation	Navigation	Waste- water treatment	Water dispute management	Water conservation	Watershed management
Agriculture									
Foreign Agricultural Service		Х		Х		Х	Х	X	X
Defense									
Army Corps of Engineers			Х	Х	Х	Х	Х		Х
Interior									
Fish and Wildlife Service									Х
State	Х	Х	Х	Х		Х	Х	Х	Х
Independent agency									
African Development Foundation		Х		Х		Х			
National Science Foundation		Х				Х			Х
U.S. Agency for International Development	Х	Х	x	Х		Х	Х	х	X
U.S. Trade and Development Agency	Х	Х	Х	х	х	X		Х	Х
Total	3	6	4		2	7	4		7

Source: GAO survey of federal agencies' freshwater programs.

About 99 percent of the estimated \$2 billion in federal financial support for freshwater programs abroad was delivered through grant programs administered by 7 agencies. The Corps was the only agency that did not have a grant program to support freshwater programs abroad. Agriculture's Foreign Agricultural Service, the Corps, State, and USAID provided a relatively small amount of financial support (about \$15 million total) through direct federal spending. Additionally, USAID obligated \$4 million in loan guarantees for water supply and wastewater treatment projects through its Development Credit Authority program to cover up to 50 percent of the risk in lending.⁴

Some of the \$2 billion for freshwater programs abroad includes funding provided from one agency to another to conduct freshwater projects in foreign countries. For example, Interior's Reclamation received funds from State to conduct desalination activities. We included funding for this effort in the financial information reported by State. See table 8 for examples of agencies that performed work on freshwater activities abroad using financial support provided to them by other agencies.

Table 8: Examples of Agencies' Freshwater-Related Activities Abroad That Were Supported by Other Agencies, Fiscal Years 2000 through 2004

Agency conducting the work	Agency that provided financial support	Examples of freshwater-related activities		
Agriculture				
Agricultural Research Service	Agriculture's Foreign Agricultural ServiceState	Irrigation		
Foreign Agricultural Service	State	Wastewater treatment		
Forest Service	• State	Watershed management		
Commerce				
National Oceanic and Atmospheric Administration	State USAID	Flood control and watershed management		
Defense				
Army Corps of Engineers	State USAID	Watershed management and wastewater treatment		

⁴The \$4 million figure represents initial obligations, not annual reestimates, of the amount in loan guarantees necessary to cover up to 50 percent of the risk in lending on USAID-supported loan projects. See appendix I for more information on loan guarantee programs and the types of financial information presented in this report.

(Continued From Previous Page)					
Agency conducting the work	Agency that provided financial support	Examples of freshwater-related activities			
Interior					
Bureau of Reclamation	State USAID	Desalination, flood control, and water dispute management			
U.S. Geological Survey	State USAID	Flood control, drinking water supply, wastewater treatment, and water conservation			
Independent agency					
EPA	State	Drinking water supply			

Source: GAO survey of federal agencies' freshwater programs.

Appendix III provides information on these and other agencies and programs that can also provide financial support for freshwater activities abroad.

Financial Support for Afghanistan and Iraq

For Afghanistan and Iraq, USAID and Defense provided about \$1 billion during fiscal years 2002 through 2004 to support the reconstruction and rehabilitation of freshwater infrastructure in these countries. For the purposes of our review, we report financial support for freshwater projects in Afghanistan and Iraq separately from the \$2 billion total in foreign aid because these funds were primarily made available during fiscal year 2004. USAID provided financial support through grants and contracts and by transferring funds to the Corps to carry out work on water supply, wastewater treatment, irrigation, and watershed projects in Afghanistan and Iraq. USAID received funds from the Emergency Supplemental Appropriation for Defense and for the Reconstruction of Iraq and Afghanistan for Fiscal Year 2004 to support, among other activities, freshwater projects in those two countries. Within the Office of the Secretary of Defense, (1) the Defense Security Cooperation Agency's Humanitarian Assistance Program supports, among other things, water infrastructure projects overseas and (2) the Army's Commander's Emergency Response Program is designed to respond to urgent humanitarian relief and reconstruction requirements at the local level in Afghanistan and Iraq. Also within Defense, the Project and Contracting Office awarded and continues to manage various contracts to support, among other things, the construction of rural water systems and the rehabilitation of drinking water supply facilities in major cities in Iraq. Table 9 presents information on financial support provided by USAID and Defense for freshwater projects in Afghanistan and Iraq.

Table 9: Federal Agencies' Estimated Financial Support for Freshwater Projects in Afghanistan and Iraq, Fiscal Years 2002 through 2004

Dollars in millions				_
	Fiscal year			
Country or agency	2002	2003	2004	Total
Afghanistan				
Defense's Defense Security Cooperation Agency ^a	\$1.2	\$1.1	\$0.5	\$2.8
Defense's Secretary of the Army ^b	-	-	5.8	5.8
U.S. Agency for International Development	15.1	9.6	82.8	107.5
Subtotal	\$16.3	\$10.6	\$89.1	\$116.1
Iraq				
Defense's Defense Security Cooperation Agency ^a	\$0.0	\$1.1	\$2.3	\$3.4
Defense's Project and Contracting Office	-	-	369.8	369.8
Defense's Secretary of the Army ^b	-	-	24.6	24.6
U.S. Agency for International Development	-	214.9	348.6	563.5
Subtotal	\$0.0	\$216.0	\$745.3	\$961.3
Total	\$16.3	\$226.7	\$834.4	\$1,077.4

Sources: U.S. Agency for International Development and Department of Defense.

Note: The figures in the table are reported as obligations in current dollars. All totals were calculated prior to rounding to the nearest million. Totals may not equal the sums of the yearly amounts due to rounding.

The United States Also Provided Financial Contributions to Various International Organizations That Support Freshwater Programs In addition to providing financial support directly through federal agencies for freshwater programs abroad, the United States also indirectly supports these programs through its contributions to numerous international organizations (e.g., the United Nations and the World Bank). In most cases, the United States makes contributions to the general budgets of these organizations and not to a specific project or program. In addition, these organizations usually combine U.S. contributions with other sources of funds, including contributions from other countries, to fund their freshwater programs. As a result, it is difficult to determine what portion of U.S. contributions to international organizations is used to support freshwater programs.

The United States contributed to the general budgets of a number of multilateral development banks and financial institutions that support

^aThe agency's Humanitarian Assistance Program funded these projects.

^bArmy's Commander's Emergency Response Program funded these projects.

freshwater projects around the world, and some portion of these contributions was used to support freshwater efforts worldwide. Using funds contributed by the United States and other countries or borrowed from world capital markets, multilateral development banks finance economic and social development programs around the world. Together, these autonomous institutions are the largest single source of developmental assistance for developing countries. The United States is a member of, and has made financial contributions to, five multilateral development banks that support freshwater projects around the world. These multilateral development banks include the African Development Bank Group, the Asian Development Bank, the European Bank for Reconstruction and Development, the Inter-American Development Bank, and the World Bank Group. The United States also contributed to other international financial institutions—including the Global Environment Facility, the International Fund for Agricultural Development, and the North American Development Bank—that also support freshwater projects abroad. See table 10 for figures on total contributions the United States made to selected multilateral development banks and financial institutions. Some portion of these contributions supported freshwater projects abroad.

Table 10: Total U.S. Contributions to Selected Multilateral Development Banks and Financial Institutions, Fiscal Years 2000 through 2004 (Some Portion of These Contributions Supported Freshwater Projects Abroad)

Dollars in millions						
	Fiscal year					
Multilateral development bank or financial institution	2000	2001	2002	2003	2004	Total
African Development Bank	\$57.8	\$105.9	\$105.1	\$5.1	\$224.5	\$498.4
Asian Development Bank	132.2	71.8	115.0	0.0	240.8	559.8
European Bank for Reconstruction and Development	36.2	36.7	35.6	35.7	35.3	179.5
Global Environment Facility	58.1	107.8	100.5	146.9	138.4	551.7
Inter-American Development Bank	69.0	34.9	18.0	42.6	24.9	189.4
International Fund for Agricultural Development	0.0	5.0	15.0	14.9	14.9	49.8
North American Development Bank	41.0	84.0	0.0	102.6	61.4	289.0
World Bank Group	992.8	783.3	796.4	1.6	1,753.4	4,327.5
Total	\$1,387.1	\$1,229.4	\$1,185.6	\$349.4	\$2,493.6	\$6,645.1

Sources: Department of the Treasury and the Environmental Protection Agency (for contributions to the North American Development Bank).

Note: The figures in the table are reported in current dollars.

The United States also contributed to the general budgets of a number of international organizations that support freshwater projects around the world, and some portion of these contributions was used to support freshwater efforts. Of these organizations, the United States contributed the most financial support to the United Nations. In addition to assisting with peacekeeping efforts, the United Nations provides funds for humanitarian, environmental, and development programs that support, among other things, water resources management efforts around the world. Table 11 presents figures on contributions the United States made to selected international organizations. Some portion of these contributions supported freshwater projects abroad.

Table 11: Total U.S. Contributions to Selected International Organizations, Fiscal Years 2000 through 2004 (Some Portion of These Contributions Supported Freshwater Projects Abroad)

Dollars in millions						
	Fiscal year					
Organization	2000	2001	2002	2003	2004ª	Total
Inter-American Institute for Cooperation on Agriculture	\$12.3	\$16.4	\$16.4	\$20.2	\$16.6	\$81.7
Organization of American States	45.8	53.3	50.1	69.0	55.3	273.5
Organisation for Economic Cooperation and Development	50.0	44.8	51.7	63.8	82.2	292.5
Pan American Health Organization	51.7	52.3	55.0	66.3	57.2	282.4
Ramsar Convention on Wetlands	0.8	0.8	1.1	0.7	0.8	4.2
United Nations ^b	569.2	592.9	673.8	775.3	506.9°	3,117.5
The World Conservation Union ^d	1.5	1.4	1.9	1.6	0.3 ^e	6.7
Total	\$731.3	\$761.7	\$849.9	\$996.8	\$719.3	\$4,085.5

Source: Department of State

Note: The figures in the table are reported as obligations in current dollars. All totals were calculated prior to rounding to the nearest million. Totals may not equal the sums of the yearly amounts due to rounding.

^aThese figures are estimates of financial contributions the United States made to the organizations in fiscal year 2004.

^bThese figures include: (1) assessed contributions to the United Nations (U.N.), and selected specialized agencies of the U.N.—Food and Agriculture Organization and World Health Organization, and (2) voluntary contributions to selected specialized agencies of the U.N.—the Food and Agriculture Organization, the U.N. Development Programme, the U.N. Environment Programme, the U.N. Framework Convention on Climate Change, and the World Health Organization.

^eThese figures do not include voluntary contributions to the U.N. or its selected specialized agencies.

^dThese figures include voluntary contributions and dues paid to the World Conservation Union.

eThis figure does not include voluntary contributions to the World Conservation Union.

Appendix III presents general information on these multilateral development banks, financial institutions, and international organizations and their freshwater programs.

Agency Comments

We provided the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Housing and Urban Development, the Interior, Transportation, and State and independent agencies, including the African Development Foundation, the Appalachian Regional Commission, EPA, the National Science Foundation, the Small Business Administration, USAID, and the U.S. Trade and Development Agency, with a draft of this report for review and comment. Three of these agencies—Interior, Health and Human Services, and USAID—provided us with written comments that are included in appendixes IV through VI. The 3 agencies agreed with the report and provided us with technical comments, which we have included as appropriate. The other 13 agencies provided us with technical comments orally or did not provide us with any comments. We have made changes in response to the technical comments throughout the report, as appropriate.

We will send copies of this report to interested congressional committees; the Secretaries of Agriculture, Commerce, Defense, Energy, Health and Human Services, Housing and Urban Development, the Interior, Transportation, and State; the Administrators of EPA, Small Business Administration, and USAID; the Directors of the National Science Foundation, Office of Management and Budget, and U.S. Trade and Development Agency; the President of the African Development Foundation; the Federal Co-Chair of the Appalachian Regional Commission; and other interested parties. We will also make copies available to others upon request. In addition, the report will be available at no charge on the GAO Web site at http://www.gao.gov.

If you or your staff have any questions, please call me or Edward Zadjura at $(202)\ 512\text{-}3841$. Key contributors to this report are listed in appendix VII.

Anu K. Mittal

Director, Natural Resources and Environment

Am K. Mettal

Scope and Methodology

The objectives of our review were to determine for fiscal years 2000 through 2004 how much financial support federal agencies provided for freshwater programs in the United States and abroad.

To identify the agencies that support freshwater programs in the United States and abroad, we reviewed the Catalog of Federal Domestic Assistance and reports published by GAO, the Congressional Research Service, the United Nations, and the National Research Council of the National Academies. We also interviewed water and natural resources experts at the Congressional Research Service. For the purpose of our review, we examined freshwater programs that support desalination; drinking water supply; flood control; irrigation; navigation (primarily for river-based transportation); wastewater treatment; water conservation; water dispute management; and watershed protection, restoration, and management activities. We identified numerous agencies that support at least one of these freshwater programs. After conducting additional background research and interviews with officials at these agencies, we narrowed our focus to 32 agencies. These agencies received congressional appropriations during each of the fiscal years from 2000 through 2004 and, to some extent, tracked the amount of financial support they provided for freshwater programs. Together, these agencies accounted for the majority of the federal financial support for freshwater programs in the United States and abroad during fiscal years 2000 through 2004. These agencies include the following:

- Department of Agriculture (Agriculture): Agricultural Research Service; Cooperative State Research, Education, and Extension Service; Economic Research Service; Farm Service Agency; Foreign Agricultural Service; Forest Service; Natural Resources Conservation Service; Rural Utilities Service;
- Department of Commerce (Commerce): Economic Development Administration, National Oceanic and Atmospheric Administration;

¹We also obtained financial information on the total amount of funds the Department of Defense provided to support freshwater projects in Afghanistan and Iraq through the Defense Security Cooperation Agency, Secretary of the Army, and Project Contracting Office. Although the Small Business Administration also provides loan guarantees for freshwater-related projects, these efforts are not the focus of the agency. In addition, the agency obligated a small amount of funds for these efforts during the 5-year period covered in this review. Consequently, we did not focus our efforts on these agencies.

- Department of Defense (Defense): Army Corps of Engineers (Corps), Army Material Command, Office of Naval Research;
- Department of Energy (Energy);
- Department of Health and Human Services (Health): Administration for Children and Families, Indian Health Service;
- Department of Housing and Urban Development (Housing): Office of Community Planning and Development;
- Department of the Interior (Interior): Bureau of Indian Affairs, Bureau of Land Management, Bureau of Reclamation (Reclamation), Fish and Wildlife Service, National Park Service, U.S. Geological Survey;
- Department of State (State);
- Department of Transportation (Transportation): Federal Highway Administration, Saint Lawrence Seaway Development Corporation; and
- Independent agencies: African Development Foundation, Appalachian Regional Commission, Environmental Protection Agency (EPA), National Science Foundation, U.S. Agency for International Development (USAID), U.S. Trade and Development Agency.

To determine the amount of financial support these agencies provided for freshwater programs, we used a questionnaire to gather information on agencies' freshwater programs, including funds provided on an annual basis to support these programs. Before distributing the questionnaire, we had staff from the Resources, Science, and Industry and American Law Divisions of the Congressional Research Service review the draft questionnaire, and we included their comments, accordingly. In addition, we pretested the questionnaire with an official from the Corps and incorporated her comments, as appropriate. We sent the questionnaires, along with a cover letter, to respondents and requested that agencies return the completed questionnaire within 4 weeks. All agencies returned their

²For the purpose of our review, we defined the term "financial support" to include federal dollars provided through grant, loan, and loan guarantee programs and direct federal spending.

Appendix I Scope and Methodology

questionnaires. We conducted follow-up interviews with respondents to confirm the information and to clarify the information, if necessary.

In our questionnaire, we requested financial information on the direct costs of agencies' freshwater programs, such as capital construction and operations and maintenance costs of freshwater infrastructure. We also requested information on the amount of financial support provided for technical assistance and research and development efforts related to freshwater programs. We requested information on freshwater programs that agencies typically fund during a year and excluding atypical funding, such as financial support for freshwater projects in response to natural disasters. We obtained and reported on financial support for freshwater projects in Afghanistan and Iraq separately from the total foreign assistance because these funds were provided in recent years.

We requested this information in the form of obligations because obligations provide a good estimate of what an agency plans to spend during a fiscal year. Additionally, financial information in the form of obligations are the best measure for comparing the amount of financial support provided from year to year over a period of time. Because we reviewed a fairly recent period of time during which inflation was minimal, we reported the figures in current dollars. For loan guarantee programs, we requested that the agency provide the amount they initially obligated the year the loan was guaranteed to cover potential defaults, rather than annual reestimates of these amounts.

In cases where agencies do not track financial information in the form of obligations, we requested that senior agency officials provide the best available proxy for obligations. Some officials said that obligations are comparable to their appropriation or expenditure figures. Other officials stated that their agency collects information on actual disbursements or actual grant approval amounts. Agencies for which we do not report obligations include Agriculture's Farm Service Agency and Forest Service, Housing's Office of Community Planning and Development, Transportation's Saint Lawrence Seaway Development Corporation, and the Appalachian Regional Commission—see notes to table 1 for more

³For the purpose of our review, we excluded administrative overhead costs, such as those related to administering grant, loan, and loan guarantee programs.

Appendix I Scope and Methodology

information on these agencies' financial information. We did not independently assess the reliability of the financial information provided by agency officials because obligations are agency expectations for expenditures and there are no associated transactions to track.

Although we requested program-level financial information, we opted to present this information at the agency-level because agencies' definitions of freshwater programs vary. However, we collected the program-level financial information to ensure that agency officials reported financial support for freshwater programs consistently across agencies. As part of this effort, we confirmed with each agency that for each of the programs listed in the questionnaire, the agency only provided financial information on the freshwater portion of the program. In addition to programs that specifically supported freshwater activities, we also requested information on other programs that may provide funding for these activities. We did not include financial support from these programs in the agency totals because supporting freshwater activities is not their primary purpose and activity level data is not readily available. Consequently, the financial information we reported is an estimate of the minimum amount of financial support provided by the agencies.

In addition to the agencies that specifically supported freshwater programs, we identified and obtained information on several binational commissions, international organizations, and multilateral development banks to which the United States made financial contributions and which support freshwater programs along U.S. borders or abroad. To identify how U.S. contributions to binational commissions were used to support freshwater programs along U.S. borders, we obtained financial information from officials at State and EPA and representatives from the commissions. To identify the annual amount of the United States' financial contributions to multilateral development banks and other international organizations, we obtained financial information from officials at State and the Department of the Treasury. When necessary, we corroborated this information with support from other sources, including annual reports to Congress on U.S. contributions to international organizations.

We conducted our review from March 2004 through January 2005 in accordance with generally accepted government auditing standards.

⁴Obligation figures were reported for most of the Corps' programs except one, which was reported in expenditures.

Federal Financial Support for Freshwater Programs in the United States and along U.S. Borders

This appendix discusses federal financial support of freshwater programs in the United States and along U.S. borders in three parts. First, we provide a general overview on the agencies responsible for the majority of the federal financial support for freshwater programs in the United States, along with the total amount of financial support provided for freshwater programs during fiscal years 2000 through 2004. Second, we briefly summarize the information on some other agencies that can also provide financial support to domestic freshwater programs. Third, we provide information on (1) binational commissions that used U.S. financial contributions for freshwater projects along the U.S. borders with Canada and Mexico and (2) total U.S. financial contributions to these commissions for their freshwater programs during fiscal years 2000 through 2004.

Federal Agencies

The following agencies provide the majority of the federal government's financial support specifically for freshwater programs in the United States. These programs, as described by agency officials, documents, and reports, are discussed below.

Department of Agriculture: \$10.4 Billion

The mission of the Department of Agriculture is to provide leadership on food, agriculture, and natural resources issues on the basis of sound public policy, the best available science, and efficient management. The department conducts work under a variety of mission areas, including farm services, natural resources and the environment, research and education, and rural development. The agency provides financial support for freshwater programs primarily for the construction of drinking water and wastewater facilities, watershed and wetland management, and freshwater-related research.

Agricultural Research Service: \$523.8 Million

The Agricultural Research Service is the department's primary in-house scientific research agency. The agency conducts research to develop and transfer solutions to address agricultural problems to enhance natural resources, such as protecting and sustaining freshwater resources. The agency's authority to conduct these efforts primarily falls under the Department of Agriculture Organic Act of 1862 and the Agricultural Research Act of 1935. Freshwater programs include technological improvements in irrigation, rural and urban water recycling and reuse, nonpoint source pollution prevention, stream restoration, and flood control structures. The agency also receives financial support from other federal agencies—such as Commerce's National Oceanic and Atmospheric

Administration and the Corps—to support domestic freshwater programs, including watershed management, irrigation, and water conservation. Additionally, the agency receives funds from State to conduct freshwater activities abroad, such as irrigation systems in Pakistan and Mexico.

Cooperative State Research, Education, and Extension Service: \$172.9 Million The Cooperative State Research, Education, and Extension Service was created in 1994 through the USDA Reorganization Act. The agency provides financial support—primarily through grants to universities, nonprofit associations, private industry, and other groups—for state and local research, education, and outreach activities. The agency conducts these activities primarily through the Hatch Act of 1887, as amended, the National Agricultural Research, Extension, and Teaching Policy Act of 1977, and section 406 of the Agricultural Research, Extension, and Education Reform Act of 1998. For example, through the Hatch Act, the agency provides block grants for agricultural research on an annual basis primarily to state land grant institutions. These funds are distributed according to a statutory formula. Although the scope of the agricultural research conducted under the Hatch Act is broad, portions of the financial support are directed toward research projects on freshwater resources.

Economic Research Service: \$4.7 Million

The Economic Research Service is Agriculture's main source of economic information and research. Regarding freshwater resources, the agency primarily provides financial support for research and development programs. For example, the agency is currently conducting research on the impact of agriculture on water quality by examining (1) the influence of economic, environmental, and institutional factors affecting adoption of water conservation management practices and irrigation technologies; (2) the economics of alternative public policy mechanisms to encourage agricultural water conservation and improved water quality; and (3) the availability of water infrastructure and policy mechanisms to facilitate water reallocations and the implications for irrigated agriculture and resource costs. According to a senior agency official, these research activities are generally performed under the Agricultural Marketing Act of 1946. In addition to conducting its own freshwater programs, the agency receives funds from Agriculture's Foreign Agricultural Service to support freshwater research and development efforts to foreign countries, such as a project to support hydrological modeling of river systems in North China.

Farm Service Agency: \$24.6 Million

The Farm Service Agency was formed after a departmental reorganization in 1994 and incorporated programs from several agencies. One of the agency's primary missions is to help farmers conserve both land and water

resources. The agency supports several multipurpose programs—such as the Debt for Nature Program and the Conservation Reserve Program—that may also benefit freshwater resources, but financial information specifically for freshwater efforts is not readily available. For example, through the Conservation Reserve Program, landowners receive annual rental payments and other payments for implementing long-term conservation practices on their land, for among other things, management of wetlands. The Farmable Wetlands Program, which began as a pilot in six states in fiscal year 2001 and is part of the Conservation Reserve Program, provides payments to farmers who voluntarily restore farmable wetlands. The program expanded nationwide in fiscal year 2002 when it was authorized by the Farm Security and Rural Investment Act of 2002. Funding for this program comes from the Commodity Credit Corporation—a government-owned and -operated corporation established in 1933 to stabilize, support, and protect farm income and prices.

Forest Service: \$291.5 Million

Among its goals, the Forest Service promotes ecosystem health and conservation in part by improving and protecting watershed conditions to provide the water quality and quantity necessary to support ecological functions. In the United States, forests cover approximately one-third of the land area from which about 66 percent of freshwater originates. Under the Organic Act of 1897, one of the primary reasons for establishing national forests was to maintain and restore watersheds to protect freshwater resources. The agency fulfills these efforts by supporting programs for watershed management activities, such as conducting water quality monitoring and watershed restoration. The agency also secures water rights to protect and use freshwater on Forest Service lands.

Natural Resources Conservation Service: \$1.9 Billion The mission of the Natural Resources Conservation Service is to provide leadership in a partnership effort to help landowners conserve, maintain, and improve natural resources, including freshwater. As a part of these efforts, the agency supports watershed management, flood control, and water conservation programs. The agency provides financial support for freshwater activities through a variety of programs, including Watershed Protection and Flood Prevention Operations and the Watershed Rehabilitation Program. Most financial support for freshwater activities reported by the agency was through the Wetlands Reserve Program, which was mandated by the Food Security Act of 1985 and reauthorized by the Farm Security and Rural Investment Act of 2002. The program is voluntary and offers landowners financial and technical assistance for the restoration, protection, and enhancement of wetlands. To be eligible for the program, a landowner must have owned the land for at least 12 months and

the wetland must be restorable and suitable for wildlife benefits. As with the Farmable Wetlands Program administered by the Farm Service Agency, the source of funds for the program is through the Commodity Credit Corporation.

Rural Utilities Service: \$7.6 Billion

Part of the mission of the Rural Utilities Service is to improve the quality of life in rural communities by administering drinking water supply and wastewater treatment programs. The agency provides the most financial support for freshwater programs of any Agriculture agency. The agency primarily uses grant and loan programs to provide financial support for developing water systems in rural areas and reducing water costs for rural users. The main authority to administer these programs is through the Consolidated Farm and Rural Development Act of 1961. Municipalities, counties, special-purpose districts, Indian tribes, and nonprofit organizations are eligible for the programs. In addition, the agency provides technical assistance and training grants to nonprofit organizations to assist rural communities with drinking water and wastewater issues. Furthermore, the agency also administers a loan guarantee program for drinking water supply and wastewater treatment loans it provides. In addition to executing its own grants during fiscal years 2000 through 2004, the agency, under a memorandum of understanding, administered grants funded by Commerce's Economic Development Administration and the Appalachian Regional Commission for drinking water supply and wastewater treatment projects.

Department of Commerce: \$539.8 Million

The Department of Commerce's strategic goals include, among other things, encouraging economic growth that benefits Americans and observing, protecting, and managing the Earth's resources to promote environmental stewardship. The department's freshwater programs include water infrastructure and water availability activities.

Economic Development Administration: \$337.5 Million

The Economic Development Administration, established by the Public Works and Economic Development Act of 1965, as amended, leads the federal government's economic development efforts by facilitating growth in America. Through its Public Works and Economic Adjustment Assistance Programs, the agency provides grants to communities and entities in regions experiencing economic decline and distress. These grants are used for, among other things, revitalizing, expanding, and upgrading the physical infrastructure, including water and sewer systems. Under the Partnership Planning Program, the agency also provides grants

for planning and technical assistance. The agency can track the majority of its freshwater activities using standard industrial codes, such as water system and water treatment. The agency also supports other programs that can provide funds for freshwater-related activities. In addition to executing its own grants during fiscal years 2000 through 2004, the agency, under a memorandum of agreement, administered grants funded by the Appalachian Regional Commission and Defense's Office of Economic Adjustment to carry out freshwater infrastructure activities.

National Oceanic and Atmospheric Administration: \$202.3 Million Among its missions, the National Oceanic and Atmospheric Administration researches and gathers data related to changes in the weather and availability of water. Several offices within the agency provide financial support for freshwater activities. The National Weather Serviceauthorized under the Organic Act of October 1, 1890, as amended, and the Flood Control Act of 1938, as amended—provided the largest portion of the agency's budget for freshwater programs. Within its hydrology program, the National Weather Service supports watershed management and flood control activities, such as forecasting water availability activities on rivers, lakes, and streams and inland water research. In addition, the Office of Oceanic and Atmospheric Research provides financial support for drinking water supply, water conservation, watershed management, and navigation in the Great Lakes region. These activities are carried out under various legal authorities, such as the National Climate Program Act (15 U.S.C. §§ 2901-2908) and the Great Lakes Water Quality Agreement of 1978, as amended. Other offices within the National Oceanic and Atmospheric Administration also provide financial support for, among other things, fisheries and aquatic species management and freshwater-related activities in coastal, estuarine, and marine environments. During fiscal years 2000 through 2004, the agency performed work in other countries, but funding for these efforts typically originated with State and USAID.

Department of Defense: \$12.9 Billion

The Department of Defense provides services for military and civilian purposes. The Corps provides financial support for the vast majority of the department's freshwater programs for civilians through its Civil Works program. In addition, the Army and Navy provide financial support for science and technology research on drinking water supply, water conservation, wastewater treatment, and desalination. Some of these technologies have the potential to be transitioned from a military function to benefit civilians.

Army Corps of Engineers: \$12.9 Billion

The Army Corps of Engineers provides engineering services for military and civilian purposes. In addition to designing and managing construction of military facilities, the Corps plans, designs, builds, and operates water resources and other civil works projects through its Civil Works program. The Corps carries out water infrastructure and environmental management and restoration projects under various legal authorities, including numerous river and harbors acts, flood control acts, and Water Resources Development Acts. Activities supported include navigation, flood protection, dam and reservoir projects, and drinking water and wastewater projects. The Corps' annual appropriations are primarily directed to specific projects. These appropriations are received through Energy and Water Development appropriation acts rather than the Department of Defense appropriations acts. In addition to annual appropriations from the general fund, the Corps receives appropriations from dedicated funding sources, such as the Harbor Maintenance Trust Fund and the Inland Waterway Trust Fund, which receive revenue through receipts of, respectively, a tax on port use and a tax on fuel used by vessels in commercial waterway transportation. The Corps also performs domestic work funded by agencies, such as EPA, Agriculture, and Interior.

Army Material Command: \$20.4 Million

The Army Material Command conducts research related to, among other things, the logistics of providing water for combat operations on land. The agency performs in-house research, manages contract efforts, and supports other military and government agencies with drinking water treatment, monitoring, storage, and distribution; wastewater treatment; desalination; and water conservation programs. Within the agency, the Army Tank-Automotive Research, Development and Engineering Center researches, develops, engineers, and integrates advanced technology into ground operations. For example, the Water Purification and Recovery Technology program seeks to reduce the logistical burden of providing water for ground troops. According to Army officials, the Army carries out these activities under its general mission to provide and equip combat operations on land.

Office of Naval Research: \$16.8 Million

The Office of Naval Research coordinates, executes, and promotes the science and technology programs of the U.S. Navy and Marine Corps. The agency provides financial support through direct federal spending and grant programs for drinking water supply, wastewater treatment, and

 $^{^{\}rm l}\textsc{Funding}$ provided for regulatory permitting activities are not included in the agencywide totals.

desalination projects. In addition to private contractors, the agency collaborates with schools, universities, government laboratories, and nonprofit organizations to execute its science and technology programs. More recently in fiscal year 2003, in response to appropriations committee direction, the Office of Naval Research began funding the Expeditionary Unit Water Purification project, which will develop prototype demonstrators to produce drinking water from brackish or saline water. The agency leads this effort, which involves other federal agencies, such as the Army, Interior's Reclamation, and the Department of Energy. The Office of Naval Research conducts its research efforts under 10 U.S.C. §§ 5022-5023.

Other Defense Programs

The Office of the Secretary of Defense administers programs that can provide financial support for freshwater activities, although that is not the focus of the programs. For example, the Strategic Environmental Research and Development Program and the Environmental Security Technology Certification Program fund research for technologies related to, among other things, water quality and wastewater treatment. In addition, the Legacy Program supports watershed rehabilitation and freshwater conservation efforts, although these efforts are not specifically tracked.

The Office of Economic Adjustment provides technical expertise and financial support to state and local governments in planning community adjustments. The agency may acquire the services of Commerce's Economic Development Administration to execute grants that implement plans to convert former military bases to civilian uses. According to a senior agency official, the agency does not track its implementation projects by category, some of which could be water infrastructure projects.

Department of Energy: \$17.3 Million

Created by the Department of Energy Organization Act of 1977, Energy's mission is to advance the national, economic, and energy security of the United States; promote scientific and technological innovation in support of that mission; and ensure the environmental cleanup of the nation's nuclear weapons complex. Although freshwater-related issues are not a primary focus, the department, through grants and direct federal spending, provides financial support for groundwater cleanup projects and for the

²The administration has not requested funding for the Expeditionary Unit Water Purification project in its annual budgets, but Congress has nevertheless provided funding since fiscal year 2003.

research and development of desalination technologies. As provided for in the Uranium Mill Tailings Radiation Control Act of 1978, the department engages in groundwater cleanup and remediation activities at several former uranium mill sites. The department also provides funding for alternative clean water supplies, a distillation water treatment plant, and flood control activities at these sites. In addition, Energy and Interior's Reclamation collaborated to produce a national road map in 2003 for the research and development of desalination and water purification technologies. The Conference Committee report accompanying the 2004 Energy and Water Development Appropriations Act directed Energy's Office of Environmental Management's Technology Development and Deployment Program to provide \$3 million to support the research and development of desalination research technologies. Sandia National Laboratories coordinated these activities for the department.

Department of Health and Human Services: \$484.9 Million

The Department of Health and Human Services is the government's principal agency for protecting the health of Americans and providing essential human services. The department's freshwater programs primarily provide financial support for water supply and wastewater treatment systems.

Administration for Children and Families: \$30.7 Million

The Administration for Children and Families promotes the economic and social well-being of families, children, individuals, and communities. As part of these efforts, the Office of Community Services provides training and technical assistance grants on a regionwide basis to help small, rural, low-income communities construct, repair, and rehabilitate water and wastewater systems. The agency's Rural Community Facilities Development Program provides these services, authorized under section 680 of the Community Services Block Grant Act included in the Coats Human Services Reauthorization Act of 1998. Project activities under this program include (1) providing training and technical assistance to lowincome rural communities to develop expertise needed to establish and manage water facilities; (2) improving the coordination of federal, state, and local agencies with rural water and wastewater management; and (3) educating local, rural community leaders about available federal resources. According to agency officials, the program enables rural communities to comply with the requirements of the Clean Water Act and the Safe Drinking Water Act. Entities eligible for the program include multistate, regional, private, and nonprofit 501(c)(3) tax-exempt organizations.

Indian Health Service: \$454.2 Million

The Indian Health Service originated in 1955 when Interior transferred administration of the American Indian and Alaska Native health programs to the Department of Health and Human Services. However, the Indian Health Service continues to receive annual appropriations from a budgetline within Interior's annual appropriations. The Office of Environmental Health and Engineering provides technical and financial support to Indian tribes and Alaska Native communities to promote a healthy environment through the cooperative development and continuing operation of safe water, wastewater, and solid waste systems. The Sanitation Facilities Construction Program is the Indian Health Service's primary water infrastructure program. Program services are authorized under Public Law No. 86-121, Indian Health Care Improvement Act (Pub. L. No. 94-437), as amended, and the Indian Self-Determination and Education Assistance Act (Pub. L. No. 93-638), as amended. The Indian Health Service may provide sanitation facilities directly or in partnership with other federal agencies or with nonfederal entities. The agency's nonfederal project partners could include tribes, tribal-designated housing entities, tribal enterprises, states, counties, and municipalities. The agency's federal partners include Housing's Office of Native American Programs, Interior's Bureau of Indian Affairs and Reclamation, Agriculture's Rural Utilities Service Program, and EPA. The agency may also administer projects funded by those federal agencies to provide sanitation facilities services to tribes.

Department of Housing and Urban Development: \$2.3 Billion

The Department of Housing and Urban Development supports community development through partnerships with states and local governments. The department's primary tool for providing financing for public improvements is the Community Development Block Grant program, authorized under title 1 of the Housing and Community Development Act of 1974, as amended. The program is managed by (1) the Office of Community Planning and Development and (2) the Office of Public and Indian Housing.

Office of Community Planning and Development: \$2.3 Billion

The Office of Community Planning and Development runs the Community Development Block Grant program for states, entitled cities and counties, and insular areas (U.S. territories). Grant recipients design and administer their projects, and the Office of Community Planning and Development provides project oversight. In order to qualify for a grant, a project must meet one of the following national objectives: (1) principally benefit lowand moderate-income families, (2) aid in the prevention or elimination of slums or blight, or (3) meet other urgent community development needs. The agency can track some of its freshwater projects on the basis of

general categories, such as water and sewer and flood and drainage activities. In addition to the Community Development Block Grant program, local governments may apply for a loan guarantee program, authorized under section 108 of the Housing and Community Development Act of 1974, as amended.³ The local government pledges its future year Community Development Block Grant funds as security for a federally guaranteed loan, which provides funds to pursue neighborhood revitalization projects. Freshwater projects are not specifically tracked in this program. In addition to executing its own grants during fiscal years 2000 through 2004, the agency, through a memorandum of agreement, administered grants funded by the Appalachian Regional Commission.

Office of Public and Indian Housing

The Office of Public and Indian Housing provides programs for Indian tribes and Alaska Native communities, which are similar to those provided by the Office of Community Planning and Development. These programs are the Indian Community Development Block Grant program governed by title I of the Housing and Community Development Act of 1974, as amended,⁴ and the Indian Housing Block Grant program governed by the Native American Housing Assistance and Self Determination Act of 1996. The programs can provide financial support for water infrastructure projects; however, the freshwater component is not specifically tracked. Indian Housing Block Grant recipients are eligible to secure financing for affordable housing activities using a 95 percent federal loan guarantee under title VI of the Native American Housing Assistance and Self-Determination Act. Infrastructure projects that support freshwater and sanitary waste disposal for low- and moderate-income households are eligible activities under the title VI program.

Department of the Interior: \$6.3 Billion

Part of the mission of the Department of the Interior is to protect natural areas through scientific research and to foster sound use of land and water resources. Consequently, the department supports multiple types of freshwater programs.

Bureau of Indian Affairs: \$390.7 Million

Specifically related to freshwater resources, the Bureau of Indian Affairs is responsible for protecting water and land rights and developing and

 $^{{}^{\}bar{3}}\text{Regulations}$ governing the section 108 program may be found at 24 C.F.R. Part 570, Subpart M.

⁴Regulations governing the program appear at 24 C.F.R. Part 1003.

maintaining infrastructure, such as dams and drinking water facilities, on 55.7 million acres of land held in trust by the United States for Indian tribes and Alaska Native communities. As part of these efforts, the agency provides financial support for drinking water supply, wastewater treatment, irrigation, dam safety, water rights litigation and negotiation, and Indian land and water claim settlements programs. The agency's authority to support these programs comes primarily from the Snyder Act of 1921 and the Indian Dams Safety Act of 1993.

Bureau of Land Management: \$313.3 Million

The mission of the Bureau of Land Management is to sustain the health, diversity, and productivity of federally owned lands that are located primarily in 12 western states. As such, the agency supports watershed management and water dispute management activities and carries out these efforts primarily under the Federal Land and Policy Management Act of 1976. Among its programs, the agency supports water resource inventories, watershed assessments, wetland and stream projects, and the monitoring of lake and stream ecosystems.

Bureau of Reclamation: \$3.7 Billion

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner. As a part of these efforts, the agency is the nation's largest supplier of water—managing 457 dams and 348 reservoirs in 17 western states—and delivers water to irrigate 10 million acres of land and to supply more than 31 million municipal, rural, and industrial water users. Financial support for freshwater programs is provided under a number of different legal authorities, but primarily under the Reclamation Act of 1902. The agency provides financial support for freshwater activities primarily through the Water and Related Resources program, through direct federal spending and through grant, loan, and loan guarantee programs. The terms of funding vary and are dictated by project authorization, legislation, or other authorizations. In addition to annual appropriations, Reclamation receives funding from a variety of sources,

⁵In fiscal year 2002, the agency dissolved its loan guarantee program.

such as the Reclamation Fund,⁶ Central Valley Project Restoration Fund,⁷ and funds collected from surcharges placed on the use of water and power. Reclamation also receives funds from other federal agencies to conduct various freshwater programs, such as collecting data for the U.S. Geological Survey's watershed management and flood control activities. Moreover, Reclamation—under section 607 of the Foreign Assistance Act of 1961—periodically received funds from USAID and State to conduct freshwater projects in other countries during fiscal years 2000 through 2004.

Fish and Wildlife Service: \$653 Million The mission of the Fish and Wildlife Service is, working with others, to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people. As such, the agency's freshwater programs primarily support watershed protection, restoration, and management through direct federal spending and grant programs.⁸ For example, under the Landowner Incentive Program, the agency provides grants to state agencies with primary responsibility for fish and wildlife to establish or supplement landowner incentive programs that protect and restore habitats on private lands. Freshwater programs carried out by the agency are conducted under a number of different legal authorities generally under the North American Wetlands Conservation Act of 1989, the Pittman-Robertson Wildlife Restoration Act of 1937, and the Dingell-Johnson Sport Fish Restoration Act of 1950. According to agency officials, the majority of the funds come from dedicated funding sources—the Pittman-Robertson Wildlife Restoration Act and the Dingell-Johnson Sport Fish Restoration Act, which includes excise taxes collected on sporting arms, ammunition, bows and arrows, and fishing equipment. The remaining funds come from annual appropriations from the general fund.

⁶The Reclamation Fund—a special fund established by Congress under the Reclamation Act of 1902, as amended—receives revenue from the sale of public lands, proceeds from the Mineral Leasing Act, and certain other revenues. Reclamation receives congressional appropriations from this fund for investigating, constructing, operating, and administering Reclamation projects.

⁷The Central Valley Project Restoration Fund—authorized in the Central Valley Project Improvement Act, title 34 of Public Law 102-575—provides funding for habitat restoration, improvement and acquisition, and other fish and wildlife restoration activities in the Central Valley project area of California. Revenues are derived from payments by project beneficiaries and from donations.

⁸Funding provided for listing activities under the Endangered Species Act are not included in the agencywide totals.

National Park Service: \$227.4 Million

The mission of the National Park Service is to preserve unimpaired natural and cultural resources and values of the national park system. Through the National Park Service Organic Act of 1916, the agency mainly supports watershed protection, restoration, and management programs as well as drinking water supply and water rights management programs. Each of the 388 national parks is responsible for management activities in the park. Information on the amount of financial support provided for freshwater programs at individual parks is not tracked centrally. However, the agency did provide information on major freshwater projects as well as the financial support provided by the Water Resources Division. The agency conducts freshwater work directly through wetlands restoration efforts at the Everglades National Park and stream restoration activities affiliated with the removal of the Elwha and Glines Canvon Dams in Olympic National Park. In addition, the Water Resources Division within the agency provides direct financial and technical support for freshwater resources management and policy and operation support to units of the national park system.

U.S. Geological Survey: \$1.1 Billion

The mission of the U.S. Geological Survey is to provide reliable scientific information to, among other things, describe and understand the Earth and manage freshwater resources. The agency conducts programs that support the planning and operation of freshwater resources, primarily through technical assistance and research activities. Specifically, the agency collects basic data on stream flow, groundwater levels, and water quality and conducts interpretive studies designed to answer specific questions about water resources. These activities are primarily carried out through the Cooperative Water Program, National Water Quality Assessment, and Hydrologic Networks and Analysis Program. The agency conducts its freshwater programs under many different legal authorities—most generally under the U.S. Geological Survey Organic Act. The agency also receives funds from other federal agencies—such as EPA, the Corps, State, and Interior's National Park Service—to gather data on water resources and water contaminant studies.

Department of Transportation: \$182.7 Million The Department of Transportation develops and coordinates policies to provide for an efficient and economical national transportation system. The department's freshwater programs include watershed management and navigation.

Federal Highway Administration: \$116.2 Million

The Federal Highway Administration is charged with carrying out highway safety projects and administering the Federal-Aid Highway Program. Funded by the Highway Trust Fund as authorized by the Transportation Equity Act for the 21st Century and other acts, the program provides financial resources and technical assistance to state and local governments for constructing, preserving, and improving highways. The program provides financial support for selecting, planning, designing, and building highways. Funds may also be used for reducing water pollution due to highway runoff and are included in the project's overall costs. States are responsible for project oversight and may voluntarily report data spent on individual project costs to the Federal Highway Administration. Another component of the Federal-Aid Highway Program is the wetland mitigation program, which replaces an average of 1.5 acres of wetlands for every acre affected by highway construction activities. Financial information on this program is not included in the agency's total because it is incomplete and primarily available on an acreage basis, which compares acres of wetlands replaced and the acres affected by highway construction activities.

Saint Lawrence Seaway Development Corporation: \$66.5 Million A wholly owned government corporation within the Department of Transportation, the Saint Lawrence Seaway Development Corporation was created by the Wiley-Dondero Act of May 13, 1954. In cooperation with the Canadian St. Lawrence Seaway Management Corporation, the agency serves the marine transportation industries by providing a safe, secure, reliable, efficient, and competitive international waterway. The agency constructs, operates, and maintains the part of the St. Lawrence Seaway between Montreal and Lake Erie that is within the territorial limits of the United States. The majority of the agency's activities are related to lock infrastructure and waterway operations, maintenance, and security. The agency receives the vast majority of its annual budget from an appropriation from the Harbor Maintenance Trust Fund. The rest of its budget is derived from other sources, such as interest income, rent payments, and the collection of noncommercial tolls.

Independent Agencies: \$15.6 Billion

Appalachian Regional Commission: \$125.2 Million The Appalachian Regional Commission, established by the Appalachian Regional Development Act of 1965, as amended, seeks to foster economic and community development across the 13-state Appalachian Region. The region includes all of West Virginia and portions of Alabama, Georgia,

Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, and Virginia. The agency provides grants, which are primarily funded by annual appropriations, for basic infrastructure services to public and nonprofit entities through its Area Development Program. According to a senior agency official, approximately 33 percent of the agency's budget goes toward grants for drinking water, wastewater, and related activities. The agency has other programs that may also provide financial support for freshwater activities, although that is not their primary purpose. The Appalachian Regional Commission grants are administered either by the agency or by another federal agency, such as Agriculture's Rural Utilities Service; Commerce's Economic Development Administration; Housing's Office of Community Planning and Development; and, occasionally, EPA.

Environmental Protection Agency: \$15.4 Billion

Within the Environmental Protection Agency, the Office of Water supports most of the agency's freshwater efforts, primarily through the Drinking Water and Clean Water State Revolving Funds. Under these programs, EPA provides grants to states for below-market loans to municipalities for drinking water or surface water protection and restoration projects. The Clean Water State Revolving Fund supports the construction of municipal wastewater facilities and nonpoint source pollution control and estuary protection projects. The Drinking Water State Revolving Fund provides financial support to community water systems for installing, upgrading, or replacing infrastructure. EPA also administers other grant programs, such as the Public Water System Supervision Grants Program, Water Quality Cooperative Agreements, Non-Point Source Grants, and Wetland Program Grants. These programs are conducted primarily under the Clean Water Act and the Safe Drinking Water Act. EPA also receives funds from other federal agencies to carry out freshwater programs. For example, EPA received funds from the Corps for wetland restoration activities in coastal Louisiana.

National Science Foundation: \$112.0 Million

Established by the National Science Foundation Act of 1950, the National Science Foundation is an independent federal agency whose mission is to promote the progress of science; advance the nation's health, prosperity, and welfare; and secure the nation's defense. Using annual appropriations from the general fund, the agency provides grants for research activities across scientific and engineering disciplines to address issues related to, among other things, the preservation, management, and enhancement of the environment. With regard to freshwater issues, the agency provides financial support for research on, among other things, drinking water treatment, desalination, flood control, wastewater treatment, and

watershed management. For example, during fiscal years 2000 through 2004, the agency—through the Science and Technology Centers Program—provided financial support to the Center for Sustainability of semi-Arid Hydrology and Riparian Areas. The center will carry out multidisciplinary research into the hydrology and management of freshwater resources in semi-arid regions.

Small Business Administration: \$0.3 Million

The Small Business Administration, created by the Small Business Act of 1953, seeks to assist the interests of small businesses. The agency does not lend money; rather, it provides loan guarantees to small businesses. The agency's Basic 7(a) and Basic 504 loan programs can be used for water infrastructure projects, such as water supply and irrigation systems, sewage treatment facilities, and dredging and surface cleanup activities. Under both programs, the agency guarantees a portion of the loans and shares the risk with a commercial lender if a borrower defaults on its loan. A senior agency official notes that unlike the Basic 7(a) program, the Basic 504 program receives no appropriations. Eligibility for the programs varies slightly, but under both programs recipients must be a for-profit corporation. The Small Business Administration initially obligated about \$327,000 during fiscal years 2000 to 2004 to cover potential default on water-related loans in its loan guarantee program. This small amount of obligations is not included in our governmentwide totals.

Other Agencies

Our review focuses on the federal agencies that provide the majority of the federal financial support for selected freshwater programs. Additional agencies that support freshwater activities, as described by agency officials, reports, and documents, are discussed below.

Bonneville Power Administration

The Bonneville Power Administration is a self-financing agency that markets wholesale electrical power and operates and markets transmission services in the Pacific Northwest. The agency pays for its costs through power and transmission sales and funds the region's efforts to protect and rebuild fish and wildlife populations in the Columbia River Basin.

Federal Emergency Management Agency

Within the Department of Homeland Security, the Federal Emergency Management Agency leads the nation's efforts to prepare for hazards and manages the federal response and recovery efforts following any national event. In terms of freshwater activities, the agency manages the National

Flood Insurance Program—a program that assists with flood insurance, floodplain management, and flood hazard mapping activities.

Regional Economic Development Entities

Regional commissions provide assistance to some of the nation's most chronically poor and distressed communities. Since its creation in 1965, the Appalachian Regional Commission has been providing assistance to counties affected by severe and chronic economic distress. More recently, Congress created additional regional economic development entities. The Delta Regional Authority, created in 2000, serves parts of Alabama, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee. The Northern Great Plains Regional Authority, created in 2002, includes the states of Iowa, Minnesota, Nebraska, North Dakota, and South Dakota. Additionally, Congress created a wholly intrastate commission in 1998, the Denali Commission, to provide infrastructure and economic development throughout Alaska.

River Basin Commissions

The Water Resources Planning Act of 1965 authorized the President to establish river basin commissions to serve as the principal agencies for coordinating the development of water and related land resources in river basins. In 1981, an executive order terminated six of these commissions. Many river basin commissions established by interstate compacts, such as the Delaware River Basin Commission, still exist. Information on federal financial assistance provided to river basin commissions is not readily available because individual commissions primarily maintain these data.

Tennessee Valley Authority

The Tennessee Valley Authority is a self-financing corporation of the federal government that supplies affordable and reliable power and operates fossil fuel, nuclear, and hydropower plants in the Tennessee Valley. The agency receives its revenues through power sales and the sale of bonds in the financial market and uses its own funds for a variety of stewardship and watershed activities. These activities include reservoir operations, navigation, watershed improvement activities, aquatic plant management, and land planning and use.

Binational Commissions

During fiscal years 2000 through 2004, the United States provided financial contributions to three binational commissions for freshwater projects along U.S. borders. The United States typically made contributions to the

budgets of these commissions, and a portion of these contributions supported freshwater projects along U.S. borders. Since the commissions coordinate activities along U.S. borders with State and EPA, financial information on the U.S. contributions for freshwater projects during fiscal years 2000 through 2004 was available. These commissions, as described by federal agencies and commission officials and documents, are discussed below.

Border Environment Cooperation Commission: \$15.4 Million

Created as a side agreement to the North American Free Trade Agreement, the Border Environment Cooperation Commission is a binational international organization that works to conserve, protect, and enhance the environment along the U.S.-Mexico border. The commission's annual budget for drinking water and wastewater treatment activities comes mainly from EPA. The commission's annual budget for irrigation, air quality, solid waste, and other projects comes from State and Mexico's Secretariat of Environment and Natural Resources. Managed by a binational Board of Directors, composed of five members from each country, the commission identifies, supports, evaluates, and certifies various environmental infrastructure projects. Once the commission certifies that sustainability and public participation requirements are met, project sponsors may qualify for funding from the North American Development Bank or from other sources requiring such certification. Additionally, through its Project Development Assistance Program, which is EPA-funded, the commission provides technical grants to qualifying border communities for the development of water and wastewater projects.

International Boundary and Water Commission: \$151.1 Million

The International Boundary and Water Commission is a binational, treaty-based organization comprised of a U.S. section, headquartered in El Paso, Texas, and a Mexican section, headquartered in Ciudad Juarez, Mexico. Through binational cooperation, the commission seeks to preserve the international land and river boundary between Mexico and the United States in a manner that balances economic, environmental, and sovereignty needs; carry out the conservation, flood control, national ownership, and utilization of international waters; and improve the quality and utilization of international waters in a manner that supports ecological needs and regional development. The U.S. section of the commission operates under State's foreign policy guidance and receives an annual appropriation through the Departments of Commerce, State, Justice, and other related agencies' appropriation bills. The U.S. section of the commission operates

and maintains two international wastewater treatment plants, multiple diversion dams, and numerous smaller in-river structures for flood control and water distribution. In addition, the U.S. section and the Mexican section of the commission jointly operate two international dams. Additionally, the U.S. section of the commission is responsible for the operation and maintenance of five flood control projects with over 500 miles of levees and related structures, which protect approximately 3 million residents and 1.5 million acres of adjoining farmland in the United States and Mexico.

International Joint Commission: \$8.1 Million

Established by the Boundary Waters Treaty of 1909, the International Joint Commission is an independent binational organization that assists the governments of the United States and Canada in addressing water quality and quantity issues and air pollution problems along the U.S.-Canadian border. The U.S. section of the commission receives an annual appropriation through State for these purposes. The commission is made up of six commissioners, three that are appointed by the President of the United States and three appointed by the Governor in Council of Canada, on the advice of the Prime Minister. Although the commission does not build or maintain any water-related infrastructure, it undertakes research efforts and analyses of binational water issues and of the operations of selected water works affecting both countries. For example, a current research and development effort is a 5-year, \$20-million study to determine changes to the operation of infrastructure that affect water levels and flows on Lake Ontario and the St. Lawrence River. The U.S. section and the Canadian government are sharing equally the cost of this study.

This appendix on U.S. financial support of freshwater programs abroad has three sections. First, we provide a general overview of the agencies responsible for the majority of the U.S. government's direct financial support for freshwater programs abroad, along with the total amount each agency provided for freshwater programs during fiscal years 2000 through 2004, excluding aid provided to Afghanistan and Iraq. Second, we briefly discuss other agencies that can also support freshwater programs abroad. Third, we provide information on international organizations to which the United States contributes annually and that support freshwater projects around the world.

Federal Agencies

The following agencies provide the majority of the U.S. government's financial support specifically for freshwater programs abroad. These programs, as described by agency officials, documents, and reports, are discussed below.

Department of Agriculture: \$26.8 Million

With the Department of Agriculture, the Foreign Agricultural Service works to improve foreign market access for U.S. products and provides food aid and technical assistance to foreign countries. As the primary agency responsible for Agriculture's international work, the agency administers international research and technical assistance activities in coordination with developing and transitional countries. These activities include international cooperative research efforts on freshwater quality and availability, irrigation, and watershed management issues. The majority of the agency's financial support for freshwater activities abroad is provided by the Export Credit Guarantee Program using various food aid agreements, as authorized by several statutes, including the Food for Progress Act of 1985; section 416(b) of the Agriculture Act of 1949, as amended; and the McGovern-Dole International Food for Education and Child Nutrition Program of 2003. Through these food aid agreements, the Export Credit Guarantee Program provides U.S. agricultural commodities to a recipient country for resale. The proceeds from the sale may be used to support various agricultural, economic, and infrastructure development projects in the recipient country. Recently, this program funded the development of, among other things, water supply, irrigation, and water treatment projects in countries such as Guatemala, Pakistan, Vietnam, and Uzbekistan. Additionally, as authorized by section 1543 of the Food, Agriculture, Conservation, and Trade Act of 1990, as amended, the agency manages the Cochran Fellowship Program, which provides opportunities

for professionals from foreign countries to attend training programs on a number of agricultural issues, including drought mitigation and irrigation management.

Department of Defense: \$0.5 Million

Although freshwater is not a focus area for the Department of Defense, the department provides financial support for several efforts related to freshwater projects abroad. In addition to providing engineering services for military and civilian purposes in the United States, the Corps, through its Civil Works program, provides technical assistance to foreign countries on a number of freshwater issues, such as wastewater treatment, flood control, and irrigation. The Corps is authorized by section 234 (Interagency and International Support Authority) of the Water Resources Development Act of 1996 to provide up to \$250,000 of its own funding for technical assistance on freshwater projects to international organizations and federal agencies in foreign countries. However, other federal agencies, such as USAID, and the governments of foreign countries often provide the funding that supports the Corps' freshwater work in foreign countries. Recently, the Corps received funds from USAID to provide technical assistance for the reconstruction of drinking water infrastructure and wastewater treatment systems in Iraq. The Corps also received funds from USAID for similar work in Afghanistan.

In addition to the Corps, the Defense Security Cooperation Agency, within the Office of the Secretary of Defense, coordinates and oversees humanitarian assistance programs abroad. Under 10 U.S.C. § 2561, U.S. military units are authorized to perform humanitarian activities (primarily carried out through contracts) in communities and areas where military units are deployed abroad. These activities include, among other activities, digging wells and improving sanitation facilities. For example, military commanders in Afghanistan and Iraq from the United States Central Command have used these funds to repair and augment drinking water and wastewater systems.

¹The estimated \$500,000 figure only includes the technical assistance provided by the Corps for freshwater projects abroad. For information on Defense's financial support for freshwater projects in Afghanistan and Iraq, see table 9 and the associated narrative.

Department of the Interior: \$128.7 Million

As part of its mission to conserve fish, wildlife, and plants and their habitats for the American people, the Fish and Wildlife Service—within the Department of the Interior—protects wetlands used by waterfowl and migratory birds, in Canada and Mexico, as well as in countries in Central and South America and the Caribbean. The agency provides financial support to protect, restore, and enhance these wetlands through several programs, including the North American Wetlands Conservation Act of 1989 and the Neotropical Migratory Bird Conservation Act of 2000. Through its North American Wetlands Conservation program, the agency coordinates with representatives from Canada and Mexico to provide grants for long-term acquisition, restoration, and/or enhancement of critical wetlands used by waterfowl and migratory birds in the three countries. Grant recipients are required to provide matching funds at a 1:1 ratio. Under the Neotropical Migratory Bird Conservation Act of 2000, the Fish and Wildlife Service established a matching grants program that, among other things, supports the maintenance, protection, and restoration of the habitats of birds in the United States, Latin America, and the Caribbean. Government agencies, individuals, corporations, and other private entities may apply for a grant from this program, if they provide \$3 for every \$1 they receive from the agency.

Department of State: \$8.7 Million

As recognized in the Foreign Assistance Act of 1961, as amended, the Department of State is the lead agency responsible for the continuous supervision and general direction of foreign assistance. The department's mission is to create a more secure, democratic, and prosperous world for the benefit of the American people and the international community.

Several bureaus within State provide financial support for freshwater programs abroad; however, the level of their involvement varies. The Bureau of Oceans and International Environmental and Scientific Affairs coordinates the department's overall policy for international environmental issues, including freshwater issues. The bureau provides grants to support international initiatives on watershed management, access to safe drinking water, flood control, and water dispute management. The Bureau of Near Eastern Affairs coordinates U.S. foreign policy and diplomatic relations with countries in the Middle East and North Africa. In support of the United State's role in the Middle East Peace Process, this bureau promotes technical cooperation between Arabs and Israelis on numerous freshwater issues. Typically, the bureau provides funds to other federal agencies, such as those within Agriculture and Interior, for projects designed to promote

water cooperation and the building of strong working relationships between water officials and experts in the region.

The Bureau of Population, Refugees, and Migration coordinates the department's efforts related to global population, refugees, and migration issues. This bureau provides financial support for various water and sanitation projects in foreign countries through grants and cooperative agreements issued to international and nongovernmental organizations. These projects provide water for drinking, irrigation, and sanitation to temporary refugee camps. Although State does not specifically track freshwater expenditures for refugee camps, a bureau official estimates that less than \$5 million a year is obligated to support these activities.

The Bureau of International Organization Affairs develops and implements the U.S. government's policies and efforts with the United Nations, its affiliated agencies, and other international organizations. This bureau manages the U.S. government's assessed and voluntary contributions to various organizations. Most of these contributions are made directly to the core budgets of these organizations and are not designated for specific activities.

Independent Agencies

African Development Foundation: \$0.9 Million The African Development Foundation is a public corporation and federal agency established by the African Development Foundation Act of 1980, as amended. The agency supports community-based, self-help initiatives to alleviate poverty and to promote sustainable development in Africa. Currently working in 15 sub-Saharan African countries, the agency provides grants of usually \$250,000 or less directly to community-based, nongovernmental organizations and enterprises administered by Africans. The agency's grants enable community-based groups to expand their production capacity and increase incomes, thereby improving the community's economic security. Although freshwater is not a program focus, the agency supported various irrigation, drinking water, and wastewater projects in countries such as Botswana, Guinea, Mali, and Niger.

National Science Foundation: \$0.7 Million

Established by the National Science Foundation Act of 1950, as amended, the National Science Foundation is an independent U.S. government agency whose mission is to promote the progress of science; advance the

national health, prosperity, and welfare; and secure the national defense. Using annual appropriations from the general fund, the agency provides grants for scientific research for various freshwater issues abroad, including watershed management, drinking water treatment, and wastewater management. The statute creating the agency authorizes it to promote the interchange of scientific information between scientists and engineers in the United States and foreign countries. For example, the agency's Office of International Science and Engineering provides grants to U.S. scientists and engineers to participate in international collaborative research partnerships with their foreign colleagues.

U.S. Agency for International Development: \$1.8 Billion

The U.S. Agency for International Development is an independent federal agency created under the Foreign Assistance Act of 1961, as amended. Operating under guidance from the Secretary of State, USAID provides economic, development, and humanitarian assistance around the world in support of U.S. foreign policy goals. As part of the agency's efforts to promote an integrated approach to water resources management, USAID provides technical assistance, educational and outreach opportunities, emergency relief assistance, and international leadership on a variety of water issues in over 76 countries. USAID reports that over the 5-year period covered in this analysis (fiscal years 2000 through 2004), approximately 5 percent of its annual appropriation has been used to support freshwater-related activities. USAID provides financial support for freshwater programs through partnerships with nongovernmental organizations; government entities (host country and U.S. government agencies); and public international organizations, such as United Nations agencies.

During fiscal years 2000 through 2004, USAID missions in Egypt, Jordan, and the West Bank/Gaza received the most financial support from USAID for freshwater projects. Most funds for freshwater projects are distributed as grants, although some funds are provided in the form of loan guarantees through USAID's Development Credit Authority. The majority of USAID's freshwater funds are used to support water supply projects. USAID also supports sanitation and wastewater management projects. Additionally, USAID provides financial support for, among other things, watershed management, irrigation, and flood and drought forecasting and preparedness activities in foreign countries. During fiscal years 2002 through 2004, USAID provided about \$670 million for the reconstruction of drinking water infrastructure and wastewater treatment systems in

²According to USAID, a mission is a USAID office in a foreign country.

Afghanistan and Iraq.³ USAID primarily drew on funds from the President's Supplemental Appropriation for the Reconstruction and Development of Iraq and Afghanistan to carry out this work.

U.S. Trade and Development Agency: \$28.6 Million

Created under the Foreign Assistance Act of 1961, as amended, the U.S. Trade and Development Agency is an agency that provides financial support to promote U.S. private sector participation in development projects in developing and middle-income countries. The agency offers early planning support to overseas development projects by funding technical assistance activities, feasibility studies, conferences, and other activities. The agency provides grants directly to host-country project sponsors (i.e., local, regional, and national governments; private sector; and nongovernmental organizations) that agree to select U.S. companies to perform the work associated with project planning. Agency-supported projects span a variety of sectors, including drinking water supply, wastewater treatment, irrigation, and flood control. For example, the agency supported the development of water treatment and supply projects in Ghana, wastewater treatment facilities in India, and an irrigation project in China.

Other Agencies

Our review focused on the federal agencies that provide the majority of the federal financial support for selected freshwater programs abroad. Additional agencies that support freshwater programs, as described by agency officials, reports, and documents, are discussed below.

Department of Health and Human Services—Centers for Disease Control and Prevention In conjunction with the Pan American Health Organization, the Centers for Disease Control and Prevention developed a Safe Water System program to help provide safe drinking water to developing countries. To date, this project has supplied inexpensive, adaptable, and flexible drinking water technologies to communities in at least 19 countries.

Export-Import Bank of the United States

The Export-Import Bank is an independent agency that assists in financing the export of U.S. goods and services to international markets by providing U.S. businesses with working capital guarantees, export credit insurance, loan guarantees, and direct loans. Although freshwater-related goods and services are not a primary focus, the bank provides financial support for

³See table 9 for more information on these USAID obligations.

the export of water purification devices, wastewater treatment systems, and technologies designed to prevent and mitigate water pollution.

Inter-American Foundation

The Inter-American Foundation is an independent foreign assistance agency that provides grants to nongovernmental organizations in Latin America and the Caribbean for economic and social development projects. The agency primarily relies on congressional appropriations to fund development projects. The agency also has access to additional funding from the Social Progress Trust Fund, which consists of payments on loans made by the United States to Latin American and Caribbean countries under the Alliance for Progress program. According to a senior agency official, the agency does not specifically track freshwater expenditures, which are a small part of the agency's total portfolio; activities supported include improving access to drinking water, developing irrigation systems, and protecting watersheds.

Overseas Private Investment Corporation

The Overseas Private Investment Corporation is a self-sustaining U.S. government corporation created to facilitate U.S. private investment in developing countries and emerging market economies, primarily by offering political risk insurance, loan guarantees, and direct loans. The agency provides financial support for various development projects worldwide, including some freshwater projects.

Peace Corps

Created in late 1961, the Peace Corps promotes world peace and friendship by helping developing countries meet their need for trained workers while promoting mutual understanding between Americans and citizens of foreign countries. The Peace Corps supports volunteers who commit to 2-year assignments in host communities where they work on various community development projects, such as teaching English, strengthening farmer cooperatives, or building sanitation systems. Although some volunteers work on water sanitation systems and agricultural projects, the Peace Corps does not directly fund any freshwater projects.

Selected International Organizations

During fiscal years 2000 through 2004, the United States indirectly supported freshwater programs abroad through its financial contributions to various international organizations that support freshwater programs abroad. The United States typically made contributions to the general budgets of these organizations, although some contributions were directed for a particular project or program. Some portion of the general budgets of these organizations was used to support freshwater projects around the

world. These organizations can be split into two groups: (1) multilateral development banks and international financial institutions and (2) other international organizations. Contributions to multilateral development banks and international financial institutions are typically coordinated by the Department of the Treasury, while contributions to the other organizations are typically coordinated by State. These organizations freshwater projects and programs, as described by officials and documents, are discussed below.

Multilateral Development Banks and Financial Institutions

African Development Bank Group

The African Development Bank Group—the African Development Bank and the African Development Fund—provides loans and offers technical assistance to African countries for development projects. The bank's priority areas include rural water supply, irrigation, and other agricultural and development projects. The bank's membership includes all countries in Africa as well as some countries in the Americas, Asia, and Europe.

Asian Development Bank

The Asian Development Bank—the Ordinary Capital Resources group and the Asian Development Fund—provides loans and loan guarantees and offers technical assistance to low- and middle-income countries in Asia and the Pacific for a variety of economic and social development projects. Traditionally, the bank supports projects related to agriculture (including irrigation) and rural development. Recently, the bank placed additional importance on its Social Infrastructure Sector, which supports projects to improve water supply. Since its inception, the bank has lent the most money to Indonesia; China, Pakistan, and India were also major borrowers.

European Bank for Reconstruction and Development Created in 1991, the European Bank for Reconstruction and Development seeks to foster the transition toward open market-oriented economies in countries in Central and Eastern Europe and the Commonwealth of Independent States. The bank provides financial support for, among other issues, the development and improvement of water and wastewater systems.

 $[\]overline{}^4$ During fiscal years 2000 through 2004, EPA provided U.S. contributions to the North American Development Bank.

Global Environment Facility

The Global Environment Facility is a multilateral, financial institution that provides grants and other financial assistance, particularly in low- and middle-income countries, for projects that protect the global environment. One of the organization's top priority areas is protecting freshwater resources. Working in partnership with the U.N. Environment Programme, the U.N. Development Programme, and the World Bank, the organization funds projects to improve protection of safe drinking water supply, manage water disputes, and reduce water-borne pollutants.

Inter-American Development Bank

The Inter-American Development Bank provides financial and technical support for various development projects in Latin America and the Caribbean. The bank funds projects in several sectors, including agriculture, fisheries, water and sanitation, and the environment. Since 1961, the bank has lent most of its money to Brazil, Argentina, Mexico, and Colombia.

International Fund for Agricultural Development

Established in 1977, the International Fund for Agricultural Development works to alleviate poverty and improve nutrition around the world, with a special focus on low-income countries. As an international financial institution associated with the United Nations, the organization provides loans and grants for technical assistance, research, and activities in several areas related to freshwater. These areas include agricultural development, irrigation, and water infrastructure development in rural areas.

North American Development Bank

Created in a side agreement to the North American Free Trade Agreement, the North American Development Bank is jointly funded by Mexico and the United States. Working closely with the Border Environment Cooperation Commission, the bank finances projects related to drinking water supply, wastewater treatment, and other environmental infrastructure projects along the U.S.-Mexico border. The United States provides its annual contributions—through EPA—to the bank as a grant. The bank may use a portion of these contributions to support freshwater projects along the U.S. borders. The bank's Board of Directors consists of members from the United States and Mexico, with the chairmanship of the board annually alternating between U.S. and Mexican representatives.

World Bank Group

The World Bank Group, the largest multilateral development bank, is made up of the International Bank for Reconstruction and Development, International Development Association, International Finance Corporation, and Multilateral Investment Guaranty Agency. These institutions provide loans and loan guarantees and offer technical assistance for various

economic and social development projects. The bank has several water-related program areas that focus on, among other things, extending water supply and sanitation services to the urban poor, increasing rural access to water supply and sanitation, and improving water resources management. The bank has funded the construction of dams, flood control infrastructure, and drinking water and wastewater treatment facilities in countries around the world. Together with the U.N. Development Programme, the World Bank created the Water and Sanitation Program, which works with donors, governments of foreign countries, and nongovernmental organizations to support the development of cost-effective water delivery technologies and implementation of strategies for providing safe water and sanitation to the world's poor.

Other International Organizations That Support Freshwater Programs Abroad

Inter-American Institute for Cooperation on Agriculture Created more than six decades ago, the Inter-American Institute for Cooperation on Agriculture is a specialized international agency that promotes agricultural development, food security, and rural economic development in North, Central, and South America and the Caribbean. The institute's focal areas include rural development, agribusiness development, and agricultural and food safety. Within these areas, the institute provides technical assistance for the management of, among other things, water resources, watershed management, and efforts to combat desertification.

Organization of American States

The Organization of American States brings together 35 countries in North, Central, and South America and the Caribbean to strengthen cooperation and advance common interests. Through its Office for Sustainable Development and Environment, the organization provides technical assistance to countries and promotes cooperation on various issues, including integrated water resources management. For example, the organization provides financial support to help countries in South and Central America manage transboundary water resources in several major river basins. The organization works in partnership with the United Nations' Environment Programme, the World Bank, and the Global Environment Facility on these projects. The organization also serves as the technical secretariat for the Inter-American Water Resources Network,

which was created in 1993 to foster cooperation on water management issues in the hemisphere.

Organisation for Economic Cooperation and Development

The Organisation for Economic Co-operation and Development brings together 30 industrialized nations in a forum to discuss, develop, and refine economic and social policies. The organization is funded by contributions from member countries, with the United States providing 25 percent of the general budget. Among other issues, the organization carries out research and analysis on water management policies, water use for agriculture, water pricing, water and wastewater infrastructure financing, and technologies to improve water quality.

Pan American Health Organization The Pan American Health Organization is an international public health agency that works to improve the health and living standards of residents in North, Central, and South America and the Caribbean. Affiliated with the United Nations and the World Health Organization, the organization provides technical support to various countries on a number of health-related issues. Among the organization's top priorities are improving supplies of clean water and adequate sanitation facilities.

Ramsar Convention on Wetlands

The Ramsar Convention on Wetlands is an inter-governmental treaty adopted in 1971 that addresses various wetlands-related issues worldwide. A small secretariat carries out the work of the convention using financial contributions from the 138 countries that are signatories to the convention. The United States makes voluntary contributions to the organization's general budget and also funds a grant program for wetlands-related training. The organization has also used U.S. contributions to support the protection of key wetland habitats for migratory birds in Latin American and the Caribbean.

United Nations

Among other purposes, the United Nations seeks to achieve international cooperation in solving economic, social, cultural, and humanitarian problems. Funded through assessed dues paid by its 191 member nations, the United Nations consists of a number of commissions, funds, organizations, and other entities developed to respond to global needs. The United States has been the largest contributor of funds since the organization's inception in 1945, making annual contributions that amount to about 22 percent of the United Nations' general budget. In addition to its assessed contributions, the United States provides voluntary contributions to the United Nations and its affiliated organizations. Most of these contributions are used for humanitarian and development programs. With

respect to freshwater projects, the United Nations provides advisory and technical assistance to governments on various freshwater issues, such as water resources management and infrastructure improvements. Within the United Nations' system, 26 entities support water-related projects. However, according to a U.N. official who works on freshwater issues, the entities do not currently work together to track the financial support provided for freshwater projects.

World Conservation Union

Created in 1948, the World Conservation Union is an international environmental organization with members from the government of foreign countries, governmental agencies, and nongovernmental entities. The organization has over 1,000 members from 140 countries, including 6 U.S. federal agencies—USAID, Agriculture's Forest Service, Commerce's National Oceanic and Atmospheric Administration, Interior's Fish and Wildlife Service and National Park Service, and EPA. The organization's mission is to encourage the conservation of nature and ensure that the use of natural resources is ecologically sustainable. In addition to providing technical assistance on the management and restoration of wetlands and water resources, the organization supports several freshwater projects, such as the Water for Nature Initiative. This initiative works with partners in approximately 40 countries to improve water resources management in 10 river basins.

Comments from the U.S. Department of Health and Human Services



DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of Inspector General

Washington, D.C. 20201

FEB 14 2005

Ms. Anu K. Mittal Director Natural Resources and Environment U.S. Government Accountability Office Washington, DC 20548

Dear Ms. Mittal:

The Department has reviewed your draft report entitled "Freshwater Programs—Federal Agencies' Funding in the United States and Abroad" (GAO-05-253) and has no comments at this time.

The Department provided several technical comments directly to your staff.

The Department appreciates the opportunity to comment on this draft report before its publication.

Sincerely

Daniel R. Levinson Acting Inspector General

Daniel R. Levinson

The Office of Inspector General (OIG) is transmitting the Department's response to this draft report in our capacity as the Department's designated focal point and coordinator for U.S. Government Accountability Office reports. OIG has not conducted an independent assessment of these comments and therefore expresses no opinion on them.

Comments from the U.S. Department of the Interior



United States Department of the Interior

OFFICE OF THE ASSISTANT SECRETARY POLICY, MANAGEMENT AND BUDGET Washington, D.C. 20240

FEB 1 6 2005

Ms. Anu K. Mittal
Director, Natural Resources and Environment
U.S. Government Accountability Office
441 G. Street, NW
Washington, D.C. 20548

Dear Ms. Mittal:

Thank you for providing the Department of the Interior the opportunity to review and comment on the draft U.S. Government Accountability Office report entitled, "FRESHWATER PROGRAMS: Federal Agencies' Funding in the United States and Abroad," (GAO-05-253), transmitted to the Secretary of the Interior on January 25, 2005. In general, we agree with the results of the draft report, with the exceptions listed in the enclosure.

The enclosure provides comments and suggestions from the Bureau of Reclamation, U.S. Geological Survey, U.S. Fish and Wildlife Service, Bureau of Land Management, and the Department's Office of Policy Analysis. We hope our comments will assist you in preparing the final report.

Sincerely,

P. Lynn Scarlett Assistant Secretary

PL50

Policy, Management and Budget

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Enclosure

Comments from the U.S. Agency for International Development



U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FEB 14 2005

Mrs. Anu K. Mittal
Director, Natural Resources and Environment
United States Government Accountability Office
441 G Street, N.W.
Washington, DC 20548

Dear Ms. Mittal:

Thank you for your letter of January 25, 2005, transmitting the GAO report entitled Freshwater Programs: Federal Agencies' Funding in the United States and Abroad (GAO-05-253). I am pleased to provide a formal response on behalf of the U.S. Agency for International Development (USAID).

We have reviewed the draft and appreciate the thorough analysis which has been performed by your team. The estimates of USAID obligations and activities you requested for Tables 8, 9, and 11 represent the most current data available to us at the time this review was made in January, 2005. The statement in the second paragraph of page 61, "USAID reports that approximately 5% of its annual appropriation is used to support freshwater-related activities." would be better expressed as:

"USAID reports that over the 5-year period covered in this analysis (FY 2000-2004), approximately 5 percent of its appropriation has been used for support of freshwater-related activities."

Thank you for the opportunity to respond to the GAO draft report and for the courtesies extended by your staff in the conduct of this research.

Sincerely,

Steve Wisecarver Acting Assistant Administrator Bureau for Management

1300 PENNSYLVANIA AVENUE, N.W. WASHINGTON, D.C. 20523

GAO Contacts and Staff Acknowledgments

GAO Contacts	Ms. Anu K. Mittal, (202) 512-3841 Edward Zadjura, (202) 512-9914
Staff Acknowledgments	In addition to those named above, Diana Cheng, Richard P. Johnson, Nathan Morris, Lynn Musser, Jonathan Nash, and Kim Raheb made significant contributions to this report. Denise Fantone, Jessica Fast, Carol Herrnstadt Shulman, and John Hutton also contributed to this report.

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