United States Government Accountability Office

GAO

Report to Congressional Requesters

July 2005

CLEAN WATER ACT

Improved Resource Planning Would Help EPA Better Respond to Changing Needs and Fiscal Constraints

GAO-05-721

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CLEAN WATER ACT

Improved Resource Planning Would Help EPA Better Respond to Changing Needs and Fiscal Constraints

GAO Accountability·Integrity·Reliability

Highlights

Highlights of GAO-05-721, a report to congressional requesters

Why GAO Did This Study

Federal and state fiscal constraints may jeopardize past and future accomplishments resulting from the Clean Water Act (the act). In this environment, it is important to manage available resources as efficiently as possible and to identify future human capital needs, including the size of the workforce and its deployment across the organization. GAO was asked to determine (1) the extent to which the Environmental Protection Agency's (EPA) process for budgeting and allocating resources considers the nature and distribution of its Clean Water Act workload and (2) the actions EPA is taking to improve resource planning and the challenges the agency faces in doing so.

What GAO Recommends

Among other things, GAO recommends that EPA identify the key workload indicators that drive resource needs, ensure that relevant data are complete and reliable, and use the results to inform its budgeting and resource allocation. In commenting on a draft of this report, EPA expressed general agreement with much of the report and two of the recommendations. EPA did voice concern that a bottom-up workload assessment contrasts with its approach, which links budgeting and resource allocation to performance goals and results. GAO continues to believe that assessing workload and how it drives resource needs is fully compatible with EPA's approach.

www.gao.gov/cgi-bin/getrpt?GAO-05-721.

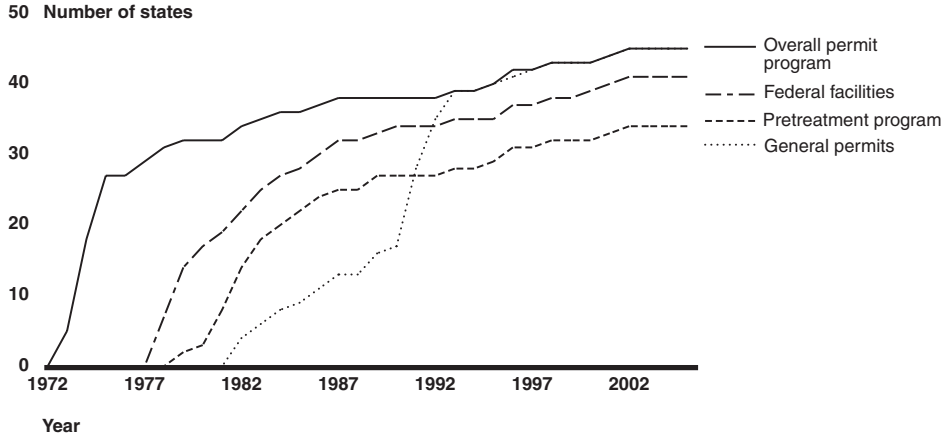
To view the full product, including the scope and methodology, click on the link above. For more information, contact John B. Stephenson at (202) 512-3841 or stephensonj@gao.gov.

What GAO Found

EPA's process for budgeting and allocating resources is largely based on historical precedent and does not fully consider the changing nature or distribution of the workload either for specific environmental laws or the broader goals and objectives in the agency's strategic plan. With prior year's allocations as the baseline, year-to-year changes are marginal. EPA's program offices and regions also have some flexibility to realign resources based on actual workload. Overall, the impact of these changes is minor, according to EPA. Because the nature and distribution of the act's workload has changed as the scope of regulated activities has grown, with EPA gaining new responsibilities and shifting others to the states, more than marginal changes may be appropriate. EPA does not conduct the periodic "bottom-up" assessments of the work that needs to be done, the distribution of the workload, or the resources needed to respond more effectively to changing needs and constrained resources.

EPA has developed initiatives that could improve its ability to plan its resources more strategically, including efforts that focus on workforce planning. These efforts are promising but could be more effective if two agencywide initiatives were better coordinated and employee skill surveys were designed to identify gaps in needed skills. Beyond these initiatives, EPA faces larger challenges in adopting a more systematic process for budgeting and resource allocation, particularly in obtaining reliable data on key workload indicators. According to EPA officials, data on many of the factors that affect workload—and thus, drive resource needs—are not comprehensive or reliable. One of the biggest challenges will be assessing which of the workload indicators represent the most significant factors in determining resource needs. While this assessment presents a challenge, it would help EPA set priorities for improving data quality.

States Authorized to Issue Clean Water Act Permits



Source: EPA.

Contents

Abbreviation

EPA Environmental Protection Agency

G A O
Accountability * Integrity * Reliability

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

July 22, 2005

The Honorable James L. Oberstar
Ranking Democratic Member
Committee on Transportation and Infrastructure
House of Representatives

The Honorable Jerry F. Costello
House of Representatives

The Honorable John F. Tierney
House of Representatives

For over 50 years, the Federal Water Pollution Control Act, commonly referred to as the Clean Water Act, has played a critical role in reducing water pollution and improving the health of the nation's waterways.[1] However, federal and state fiscal constraints may jeopardize these accomplishments and make it increasingly difficult to achieve further progress in addressing new and existing sources of pollution. In this environment, it is important to manage available resources as efficiently as possible. The Environmental Protection Agency (EPA), as the federal agency primarily responsible for administering the Clean Water Act, plays a key role in determining what must be done to meet the act's requirements, identifying the skills needed to accomplish the work, and deploying resources to the appropriate entities.

In addition to fiscal constraints, other forces, such as demographic trends and technological advances, are challenging government agencies to change the way they do business by setting priorities and managing their resources to achieve better performance more efficiently. In this context, leading private sector organizations have found that ensuring that the right people with the right skills are in the right place is critical to achieving performance goals. Relatedly, in September 2000, GAO recommended that federal agencies develop an explicit workforce planning strategy to identify their current and future human capital needs, including the size of the workforce; its deployment across the organization; and the knowledge,

[1]For consistency, we refer to the statute as the Clean Water Act throughout the report.

skills, and abilities needed for the agency to meet its goals and objectives.[2] GAO further recommended that such a strategy should be explicitly linked to the agencies' mission and strategic and program planning efforts.

For EPA specifically, both GAO and the National Academy of Public Administration have recommended that EPA use data on workload requirements and skill needs to better manage resources for its environmental programs. For example, in July 2001, GAO recommended that EPA collect information on the size of its workforce, the deployment of staff geographically and organizationally, and the skills needed to support its strategic goals.[3] GAO concluded that a workforce strategy could be particularly useful during a time of fiscal constraint because such a strategy allows the agency to tailor reductions in a manner that would minimize potential adverse impacts on EPA's programs.

To carry out its responsibilities under the Clean Water Act, EPA relies on its Office of Water, Office of Enforcement and Compliance Assurance, and 10 regional offices, as well as states' water pollution control agencies. With a number of key amendments beginning in 1972, the scope of the act has increased significantly, along with the workload associated with implementing and enforcing its requirements. Major changes included, for example, controls over pollution from sewer overflows, storm water, and animal waste at concentrated feeding operations. At the same time, EPA has authorized states to take on more responsibilities, shifting the agency's workload from direct implementation to oversight. Changes in the nature, extent, and distribution of the Clean Water Act workload can affect the resources needed to carry out the act. In this regard, section 516(b)(1) of the act requires, among other things, that EPA provide the Congress with a detailed estimate of these costs every 2 years.[4]

You asked us to determine the (1) extent to which EPA's process for budgeting and allocating resources considers the nature and distribution of its Clean Water Act workload and (2) actions EPA is taking to improve

[2]GAO, *Human Capital: A Self-Assessment Checklist for Agency Leaders*, GAO/OCG-00-14G (Washington, D.C.: Sept. 1, 2000).

[3]GAO, *Human Capital: Implementing an Effective Workforce Strategy Would Help EPA to Achieve Its Strategic Goals*, GAO-01-812 (Washington, D.C.: July 31, 2001). See also National Academy of Public Administration, *Setting Priorities, Getting Results: A New Direction for EPA* (Washington, D.C.: April 1995).

[4]33 U.S.C. §1375(b)(1).

resource planning and the challenges it faces in doing so. In addition, we determined what effort EPA has made to develop the detailed estimate of the cost of carrying out the provisions of the Clean Water Act, as required by the act. As agreed with your offices, we focused on EPA and state resources associated with implementing and enforcing the major programs under the Clean Water Act. Also as agreed, for the purposes of this review, we defined EPA's Clean Water Act workload to include activities associated with controls over pollution from specific facilities (called the National Pollutant Discharge Elimination System program) and diffuse sources, such as agricultural runoff. We also included related activities, such as setting water quality criteria and standards, for both specific pollutants and individual water bodies; monitoring water quality; and establishing requirements for the disposal of sewage sludge. We excluded (1) financial assistance for local infrastructure under the Clean Water State Revolving Fund; (2) activities for which the primary federal responsibility lay outside EPA, such as issuing permits for dredged and fill material, managed by the U.S. Army Corps of Engineers; and (3) location-specific programs, such as those focused on the Great Lakes, Chesapeake Bay, and designated sites under the National Estuary Program. (App. I contains a detailed description of our methodology.)

We performed our work between August 2004 and July 2005 in accordance with generally accepted government auditing standards.

Results in Brief

EPA's process for budgeting and allocating resources does not fully consider the agency's current workload, either for specific statutory requirements, such as those included in the Clean Water Act, or for the broader goals and objectives in the agency's strategic plan. Instead, EPA makes incremental adjustments and relies primarily on historical precedent. With prior years' allocations as the baseline, year-to-year changes are marginal and occur in response to (1) direction from the Office of Management and Budget and the Congress, (2) spending caps imposed by EPA's Office of the Chief Financial Officer, and (3) priorities negotiated by senior agency managers. In addition, EPA's program offices and regions have some flexibility to realign resources based on their actual workload, but the overall impact of these changes is also minor, according to agency officials. Changes at the margin may not be sufficient because both the nature and distribution of the Clean Water Act workload have changed as the scope of activities regulated under the act has increased and EPA has taken on new responsibilities while shifting others to the states. For example, controls over pollution from storm water and animal waste at

concentrated feeding operations have increased the number of regulated entities by hundreds of thousands and required more resources in some regions of the country. EPA may be unable to respond effectively to changing needs and constrained resources because it does not have a system in place to conduct periodic "bottom-up" assessments of the work that needs to be done, the distribution of the workload, or the staff and other resource needs.

EPA has made progress in improving resource planning, but challenges hinder comprehensive reform. Effective resource planning involves identifying the tasks that must be accomplished to achieve an organization's objectives, determining the type and level of resources needed to carry out the work, and developing a strategy to obtain the needed resources. Workforce planning is a key component of any successful resource management strategy. While EPA's initiatives related to workforce planning address, to varying degrees, some of its human capital management problems, the agency's efforts could be more effective. For example, both the Office of Enforcement and Compliance Assurance and the Office of Human Resources surveyed current employees to determine the types of skills they possess without first identifying the specific skills most needed to accomplish the agency's mission. As a result, these surveys may not necessarily capture the information EPA needs to comprehensively determine the skills gap. Although the Office of Human Resources subsequently identified priority occupations, needed competencies, and skill gaps for the agency as a whole, EPA officials acknowledge that this was a high level effort that was not linked to a detailed analysis of workload and did not provide specific information on the type and deployment of workforce needs. Other efforts by EPA show promise in providing useful information, but they are still in the early stages. As EPA moves forward with efforts to improve resource planning, it faces larger challenges in adopting a more systematic process for budgeting and resource allocation: obtaining reliable data on key workload indicators, such as the quantity and quality of water in particular areas, and overcoming internal resistance. Specifically, according to EPA officials, data on many of the factors that affect workload—and thus, drive resource needs—are not comprehensive or reliable. In addition, EPA staff may be reluctant to adopt a more systematic, data-driven approach to resource allocation, because of unsatisfactory experiences with using workload models in the 1980s.

At least in the last few years, EPA has not developed and submitted to the Congress the detailed estimate of the cost of carrying out the provisions of

the Clean Water Act, as required by section 516(b)(1) of the act. According to EPA, the agency had been operating under the assumption that the requirement had expired. Upon further investigation, EPA acknowledged that the requirement was subsequently reinstated. While silent on reports required in earlier years, EPA said that the agency had been remiss in not producing reports due in 2003 and 2005. Regardless, EPA currently lacks the information needed to develop the estimate. For example, in addition to problems with the completeness and reliability of the workload data needed to support sound cost estimates, EPA's budget and cost accounting systems cannot isolate the resources allocated to Clean Water Act enforcement activities. To the extent that EPA improves its resource planning and allocation process, and develops the data required to support such a process, the agency would also have the information it needs to estimate the cost of carrying out the provisions of the Clean Water Act.

We are making recommendations to, among other things, improve EPA's process for budgeting and allocating resources and help EPA comply with its reporting requirement under section 516(b)(1).

In commenting on a draft of this report, EPA agreed with our recommendation to comply with its reporting requirement and recognized that workforce planning strategies we recommended can be effective tools for identifying and addressing future performance needs and has already begun some of these efforts. However, EPA expressed concern that a bottom-up assessment of workload, as we recommended, contrasts with the approach it advocates, which links budgeting and resource allocation to performance goals and results. While we acknowledge EPA's concern, we believe that assessing the underlying workload and how it drives resource needs organizationally and geographically is critical to sound workforce planning and can be fully compatible with EPA's overall approach.

Background

Through the National Pollutant Discharge Elimination System program, the Clean Water Act established the basic structure for regulating discharges of pollutants into the waters of the United States, including rivers, lakes, and streams. Under this program, EPA and EPA-authorized states issue and enforce permits to regulate pollution from specific entities, including, for example, industrial dischargers and municipal wastewater treatment facilities, known as "point sources." In support of the permitting program, EPA and the states perform a number of important activities, such as monitoring water quality and setting limits on the amounts of specific

pollutants that can be discharged into water bodies. The act also requires states to implement management programs for controlling pollution from diffuse or "nonpoint" sources, such as agricultural runoff.

To carry out its responsibilities for controlling point and nonpoint source pollution, EPA relies on the Office of Water, the Office of Enforcement and Compliance Assurance, and 10 regional offices, as well as states' water pollution control agencies. As table 1 shows, since the Clean Water Act was amended in 1972, the scope of EPA and state responsibilities and the associated workload, has increased significantly.

Table 1: Increasing Workload Associated with Selected Clean Water Act Responsibilities Related to Controlling Point and Nonpoint Source Pollution Since 1972

Year	Changes in scope of Clean Water Act-related activities	Estimated workload for EPA and states (as of June 2005)
1972-1973	Clean Water Act, as amended (1972), establishes the National Pollutant Discharge Elimination System program; EPA issues implementing regulations (1973). The amendments also required EPA to oversee total maximum daily load calculations by the states.[a]	• 15,033 municipal wastewater treatment facilities (municipal facilities) covered by individual permits • 30,504 industrial facilities, 785 federal facilities, and 1,974 other facilities covered by individual permits • 52,304 facilities covered by general permits
1977-1978	Clean Water Act, as amended (1977), requires publicly owned treatment works serving industrial users to implement pretreatment programs; EPA issues implementing regulations (1978).[b]	• 1,500 municipal facilities with approved pretreatment programs, collectively covering 30,000 industrial facilities
1987	Clean Water Act amended. Among other things, the amendments require states to implement nonpoint source pollution control programs, establish a framework for regulating storm water discharges, and require EPA to issue regulations on managing sewage sludge.	• Includes controls over urban and agricultural runoff, for example; workload in different regions of the United States varies depending on pollution sources.
1990	EPA issues regulations implementing Phase I of storm water permitting program.[c]	• 1,000 municipal separate storm sewer systems[d] • 100,000 industrial facilities • Construction projects larger than 5 acres
1993	EPA issues use and disposal regulations for biosolids/sludge.[e]	• All domestic wastewater treatment facilities
1994	EPA issues policy on combined sewer overflows.[f]	• 748 communities and cities with combined sewer systems
1996	States begin establishing total maximum daily loads.	• Of nearly 55,000 water quality impairments identified, more than 14,000 total maximum daily load requirements have been issued with EPA approval.
1999	EPA issues regulations implementing Phase II of storm water permitting program.[c]	• 5,000 municipal separate storm sewer systems • 80,000 industrial facilities • Construction projects larger than 1 acre

(Continued From Previous Page)

Year	Changes in scope of Clean Water Act-related activities	Estimated workload for EPA and states (as of June 2005)
2003	EPA substantially revises regulations implementing permitting requirements for concentrated animal feeding operations.[g]	• 18,000 operations; still in the process of identifying dischargers
Ongoing	EPA is developing regulations on sanitary sewer overflows.[h]	• 20,428 municipal facilities and satellite collection systems

Source: GAO analysis of EPA data and pertinent legal and regulatory requirements.

Note: We are reporting estimated workload, as of June 2005, because data were not available to determine the workload at the time regulatory changes occurred.

[a]A total maximum daily load is a calculation of the amount of a specific pollutant that a specific body of water can receive and still meet water quality standards.

[b]Under the pretreatment program, some industrial facilities are required to pretreat their wastewater before discharging into sewer systems to remove pollutants that may pass through or interfere with the treatment processes at municipal wastewater treatment facilities.

[c]Storm water regulated under the Clean Water Act is defined as runoff from point sources, such as industrial facilities, during rain or snow events. In Phase I, EPA regulated storm water discharges from larger municipal separate storm sewer systems, and from industrial facilities, including larger construction projects. In Phase II, EPA began regulating storm water discharges from smaller municipal storm sewers and smaller construction projects.

[d]A municipal separate storm sewer system is a system designed for collecting and conveying storm water only and is not part of a publicly owned treatment works.

[e]Biosolid/sludge is any residue removed during the treatment of municipal wastewater or domestic sewage, which can be recycled under certain conditions stipulated by an EPA or state permit.

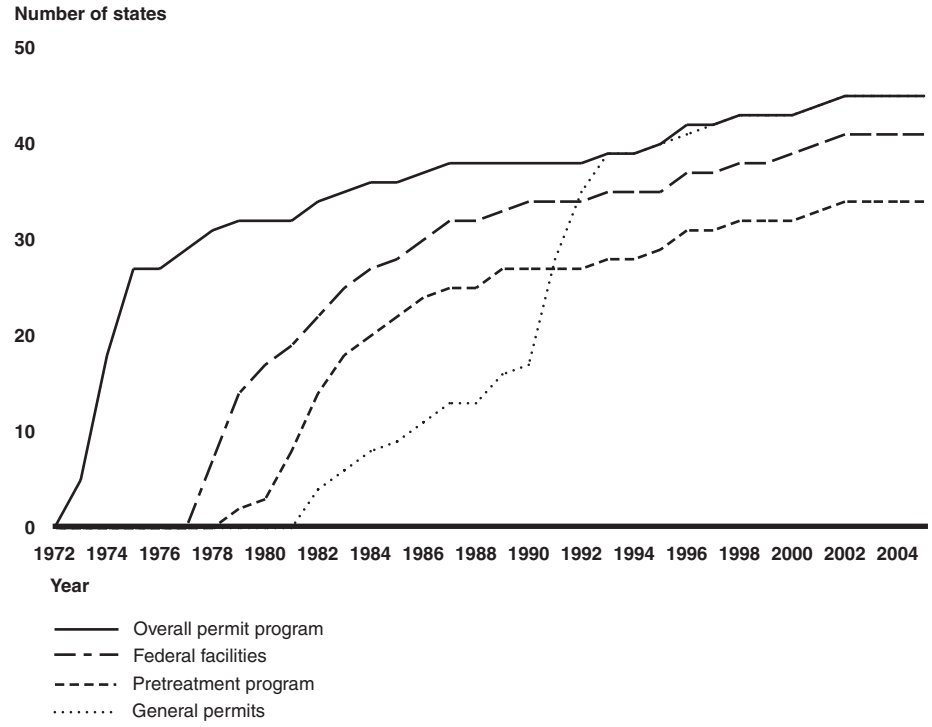
[f]A combined sewer system collects domestic and industrial sewage and rainwater runoff in one system of pipes. During periods of heavy rainfall or snowmelt, these systems may overflow, discharging untreated sewage into the nation's waters.

[g]A concentrated animal feeding operation is a facility in which animal waste can potentially enter water bodies as a result of breaks in waste storage structures or other accidents.

[h]A sanitary sewer system is a wastewater collection system designed to collect and convey only domestic sewage from homes and industrial and commercial wastewater. In such systems, storm water is conveyed through a municipal separate storm sewer system. As with combined sewer systems, however, these systems can overflow and discharge sewage directly into water bodies when collection system capacity is exceeded due to wet weather.

Even as the overall workload has increased as a result of these changes, the states have been playing a greater role in carrying out required tasks. As shown in figure 1, since 1972, EPA has authorized 45 states to perform at least some of the permitting activities associated with controlling pollution from wastewater treatment and industrial facilities. As EPA authorizes states to take on more responsibilities, the agency's workload shifts from direct implementation to oversight.

Figure 1: States Authorized to Assume Key Permitting Responsibilities, 1972 to 2004



Source: EPA.

Note: For certain types of facilities, EPA and the states issue a general permit to cover all facilities with stated characteristics.

EPA's Process for Budgeting and Allocating Resources Does Not Fully Consider the Current Workload in Terms of Strategic Goals or Specific Laws

EPA budgets and allocates resources incrementally, largely based on historical precedents, and thus its process does not reflect a bottom-up review of the nature or distribution of the current workload—either for specific environmental laws or the broader goals and objectives in the agency's strategic plan. These historical precedents are drawn from workload models EPA had developed in the 1980s, but the distribution of EPA's workload has changed over time as EPA has taken on new responsibilities under the Clean Water Act and other laws and the states gradually assumed a greater role in the day-to-day implementation of key aspects of this workload. Other factors, such as the introduction of new technologies and shifts in regional population, have also affected the amount, type, and distribution of EPA's resource needs.

Nonetheless, in developing the amounts of its budget request and subsequent resource allocations, EPA officials use prior years' allocations as a baseline and make adjustments to reflect (1) direction from the Office of Management and Budget and the Congress and (2) spending caps imposed by EPA's Chief Financial Officer, such as ceilings on staff years and payroll. For example, guidance from the Office of Management and Budget sets overall parameters for the agency's budget—generally a given percentage of the previous year's budget. Once EPA receives its appropriation from the Congress, the agency's operating plan—which is also based on historical precedent—guides the allocation of funding and staff years to the organizational units.

While acknowledging that their budgeting and resource allocation is not based on a bottom-up review, EPA officials said that the process is linked to the agency's strategic goals and objectives. They told us that the annual budgeting and resource allocation process reflects changes in program and budget priorities, as determined by senior EPA managers, across the agency and within specific program offices. In particular, officials from both the Office of Water and Office of Enforcement and Compliance Assurance told us that they make strategic decisions in developing the agency's budget—within and across agency goals and objectives—to reflect shifting priorities. For example, for fiscal year 2005, EPA asked for an additional $22 million for grants to state water pollution control agencies, including $17 million to address a need for more water quality monitoring. However, EPA officials acknowledged that shifts in funding and staff years, as a result of changing priorities, are generally marginal and that increases in priority areas are usually offset by decreases in areas of lower priority.

Within the existing system,[5] EPA and state officials have some flexibility to realign resources based on actual workload but have not taken full advantage of such opportunities.[6] For example:

[5]Realigning appropriated resources is subject to statutory language (e.g., earmarks or restrictions in appropriations acts) and reprogramming guidelines, which specify how an agency might shift funds from one object to another within an appropriations account.

[6]While opportunities for more closely linking resources and workload exist, as discussed later in this report, some of the data on key workload indicators are not complete or reliable.

- During each budget cycle, EPA's regional offices have an opportunity to influence how the program offices allocate any increases or decreases in resources, as reflected in the agency's operating plan. While, in theory, such changes could be directed to the regions based on their relative need, regional officials report that most changes are allocated based on historical precedent.

- Under section 106 of the Clean Water Act,[7] EPA must distribute grants to state water pollution control agencies based on the extent of the pollution problem in the respective states. In 1997 and 1998, an EPA-state work group developed a weighted distribution formula that considers various workload indicators, such as a state's surface water area, groundwater use, water quality impairment, point and nonpoint pollution sources, and population of urbanized areas. The formula, currently in regulations, includes a funding "floor," which stipulates that states must receive at least as much as they received in fiscal year 2000, unless funding goes down, with an annual adjustment for inflation and the current year's appropriation.[8] Consequently, as EPA regional officials pointed out, the allocations do not fully reflect relative workloads.

- In 1995, EPA and the states established the National Environmental Performance Partnership System, which gave states greater flexibility to direct resources to their most pressing environmental problems by combining funds from multiple grants. In practice, however, officials in EPA's regional offices and a state environmental organization report limited use of the funding flexibility. According to EPA officials, states have only used the program to move marginal amounts of money to target cross-cutting initiatives or other similar programs.

In terms of overall structure, EPA has organized its budget requests and allocated resources around its strategic plan, rather than specific environmental laws or programs.[9] The strategic plan lays out broad agency goals and objectives, some of which encompass Clean Water Act

[7]33 U.S.C. §1256.

[8]40 C.F.R. §35.162.

[9]EPA restructured its fiscal year 2006 budget in response to congressional direction so that it is organized by appropriations account and program project. Information on strategic goals and objectives is provided as a supplement.

responsibilities for controlling point and nonpoint source pollution. EPA's current strategic plan includes these activities primarily under two goals: Clean and Safe Water (Goal 2) and Compliance and Environmental Stewardship (Goal 5). As table 2 indicates, however, the objectives and subobjectives within each goal can include activities under multiple environmental laws. Within the agency's goal for Clean and Safe Water, for example, objectives for protecting water quality, protecting human health, and enhancing science and research address requirements under the Safe Drinking Water Act and other laws, in addition to those under the Clean Water Act.

Table 2: Strategic Plan Goals That Encompass Clean Water Act Responsibilities Related to Controlling Point and Nonpoint Source Pollution

Goal 2: Clean and Safe Water	Goal 5: Compliance and Environmental Stewardship
Objective 2.1: Protect Human Health	*Objective 5.1: Improve Compliance*
• Subobjective 2.1.1: Water Safe to Drink	• *Subobjective 5.1.1: Compliance Assistance*
• *Subobjective 2.1.2: Fish and Shellfish Safe to Eat*	• *Subobjective 5.1.2: Compliance Incentives*
• *Subobjective 2.1.3: Water Safe for Swimming*	• *Subobjective 5.1.3: Monitoring and Enforcement*
Objective 2.2: Protect Water Quality	Objective 5.2: Improve Environmental Performance Through Pollution Prevention and Innovation
• *Subobjective 2.2.1: Improve Water Quality on a Watershed Basis*	• Subobjective 5.2.1: Prevent Pollution and Promote Environmental Stewardship by Government and the Public
• *Subobjective 2.2.2: Improve Coastal and Ocean Waters*	• Subobjective 5.2.2: Prevent Pollution and Promote Environmental Stewardship by Business
Objective 2.3: Enhance Science and Research	• Subobjective 5.2.3: Business and Community Innovation
• Subobjective 2.3.1: Apply the Best Available Science	• Subobjective 5.2.4: Environmental Policy Innovation
• Subobjective 2.3.2: Conduct Leading-Edge Research	Objective 5.3: Build Tribal Capacity
	Objective 5.4: Enhance Science and Research
	• Subobjective 5.4.1: Strengthening Science
	• Subobjective 5.4.2: Conducting Research

Source: EPA.

Note: Italicized text indicates objectives and subobjectives related to controlling point and nonpoint source pollution. Some activities under Goal 4, Healthy Communities and Ecosystems, which includes location-specific programs authorized under the Clean Water Act, such as those focused on the Great Lakes and Chesapeake Bay, also involve controlling point and nonpoint sources of pollution.

According to officials from EPA's Office of the Chief Financial Officer, Office of Enforcement and Compliance Assurance, and Office of Water, isolating the amount of resources dedicated to specific Clean Water Act programs and activities would be extremely difficult. The officials said that the budgeting and allocation structure aligns resources with goals and

objectives that encompass multiple laws and programs and is not intended to provide statute-specific or program-specific breakdowns. The Office of Enforcement and Compliance Assurance, in particular, organizes its budget into program projects, such as compliance monitoring and civil enforcement, that cut across all environmental media.

Recognizing these difficulties, we asked budget officials within the Office of Enforcement and Compliance Assurance and Office of Water to estimate the funding and staff years allocated to EPA's regional offices for controlling point and nonpoint source pollution under the Clean Water Act and to provide the amounts allotted to the states under two grant programs that support such activities at the state level. (See app. II for this information.)

EPA Has Made Some Progress in Improving Its Resource Planning, but Challenges Remain

To plan their resources most effectively, organizations must determine what they need to accomplish their work and develop a plan to meet those needs by obtaining staff and other resources. EPA has developed several initiatives that could improve the agency's ability to plan its resources more strategically, including some efforts that focus on workforce planning and others that could provide key information needed to support a data-driven approach to budgeting and allocating resources. Beyond these initiatives, however, EPA faces larger challenges in adopting a more systematic process for budgeting and resource allocation: obtaining reliable data on key workload indicators and overcoming internal resistance to adopting such a process.

Effective Resource Planning Involves Identifying Staff and Other Resources Needed to Meet Performance Goals and Fulfill the Organization's Mission

At its most basic level, effective resource planning involves identifying the specific activities and tasks that must be accomplished to achieve an organization's objectives, determining the type and level of resources needed to carry out the work, and developing a strategy to obtain the needed resources. Realistically, because organizations rarely have access to unconstrained budgets, managers typically have to set priorities so that the most important tasks can be accomplished within available resources. Particularly in an environment of limited resources, the data that inform resource planning are useful in helping decision makers determine how best to absorb budget cuts. Because an organization's employees often account for a significant share of its resources, workforce planning is a key component of any successful resource management strategy.

Studies by GAO and others have shown that successful organizations use strategic workforce planning to identify and fill the gaps between their current and future workforce needs in meeting organizational goals and fulfilling their overall mission. Strategic workforce planning encompasses a broad array of initiatives to attract, retain, develop, and motivate a top-quality workforce with the skills needed to meet performance goals. In 2003, for example, we reported that successful organizations have used strategic workforce planning as a tool to both identify current needs and anticipate and prepare for upcoming human capital issues, such as an aging workforce or changes in mission-critical skills, that could jeopardize the accomplishment of goals.[10] More recently, we found that leading organizations go beyond a succession planning approach that focuses on simply replacing individuals and, instead, engage in broad, integrated efforts that focus on strengthening both current and future organizational capacity.

Our 2003 report said that an analysis of gaps in an organization's workforce should identify how many employees have the skills and competencies needed to meet program goals and the number that are likely to remain with the agency over time, given expected losses due to retirement and other attrition. Similarly, the report found that a forward-looking analysis should identify the specific skills and competencies that will be needed to meet future goals. We concluded that workforce gap analyses can be useful in justifying budget requests by showing the link between the program goals and the staff resources needed to accomplish them.

In July 2001, we reported specifically on EPA and the extent to which the agency was using key management practices associated with successful human capital strategies, including strategic workforce planning.[11] We also examined how EPA's Office of Enforcement and Compliance Assurance deployed resources across the 10 regional offices to ensure consistent enforcement of federal environmental requirements. Among other things, we recommended that EPA

- develop a system for workforce allocation and deployment that is explicitly linked to the agency's strategic and program planning efforts

[10]GAO, *Human Capital: Key Principles for Effective Strategic Workforce Planning*, GAO-04-39 (Washington, D.C.: Dec. 11, 2003).

[11]GAO-01-812. 25, 26.

and that is based on systematic efforts of each major program office to accurately identify the size of its workforce, the deployment of staff geographically and organizationally, and the skills needed to support its strategic goals;

- design succession plans to maintain a sustained commitment and continuity of leadership within the agency; and

- target recruitment and hiring practices to fill the agency's short- and long-term human capital needs and, specifically, to fill gaps identified through EPA's workforce planning system and implement training with an explicit link to needed competencies.

Our recommendations to EPA's Office of Enforcement and Compliance Assurance expanded on some of the same themes. For example, we recommended that the office develop a systematic method for deploying resources to address the agency's enforcement workload, taking into account the workforce planning information needed to analyze the workload. According to our report, such information should include the level of resources currently being allocated to specific enforcement activities; the factors that determine the enforcement workload in each region; and the specific skills needed to address each region's workload, along with the number of employees who possess such skills.

EPA Has Several Efforts Under Way to Improve Resource Planning

EPA has initiated several efforts that could improve the agency's ability to strategically plan its workforce and other resources. While some of these efforts are not directly related to workforce planning, they could give the agency some of the information needed to support a systematic, data-driven method for budgeting and allocating resources.

Three initiatives within EPA focus specifically on workforce planning, including one by the Office of Enforcement and Compliance Assurance, which focused on civil enforcement activities and was completed in 2003, and two agencywide efforts that are still in the early stages of development. The agencywide efforts are being managed by EPA's Office of Human Resources and the Office of the Chief Financial Officer. These three initiatives are as follows:

- *Workforce Deployment Review for civil enforcement activities.* In response to our July 2001 report, the Office of Enforcement and Compliance Assurance surveyed about 2,600 headquarters and regional

employees engaged in civil enforcement activities to identify existing workforce skills and specific areas of programmatic expertise.[12] EPA's report on the survey, issued in October 2003, recommended, among other things, expanding the survey to include all of the office's employees, periodically updating the information, and aligning training with national priorities.[13] In addition, the report recognized that circumstances have changed since the 1980s, when EPA last used the workload models to establish a baseline. The report concluded that enforcement officials should reexamine the existing practice of adjusting staff levels based on historical precedent.

- *Strategic workforce planning process*. In response to guidance from the Office of Management and Budget, EPA's Office of Human Resources is currently working on a strategic workforce planning process to help EPA identify and address skill needs agencywide. Human Resource officials believe that EPA should be using detailed workforce plans to drive its budget requests and make informed decisions about how to make the best use of the resources it receives. The new planning process includes (1) analyzing the skills needed to achieve agency goals now and in the future, (2) assessing the skills possessed by the current workforce, (3) identifying any current or future gaps in critical skills, and (4) developing strategies to fill such gaps. During 2003, the Office of Human Resources piloted a computer-based tool designed to capture information on the skills possessed by EPA staff but abandoned the effort in response to complaints that the tool was overly complicated and did not provide helpful information. In 2004, the office's workforce planning team reviewed the agency's strategic plan and other relevant studies and interviewed key stakeholders inside and outside EPA to develop a strategic picture of the agency's future work and workforce requirements. The team corroborated its findings with senior EPA executives, who provided their views on the work that the agency will be doing in the future and described the workforce in terms of the priority, mission-critical competencies, and occupations needed to

[12]The skills assessment represents one element of the information needed to support a systematic method for deploying enforcement resources to address the agency's workload. We also recommended that the office develop other information, such as the level of resources currently being allocated to specific enforcement activities and the factors that determine the enforcement workload in each region. However, enforcement officials indicated that internal time constraints limited their ability to address these issues.

[13]EPA, *The Workforce Deployment Review*, *Executive Steering Committee Report* (Washington, D.C.: October 2003).

support the work. As a result of this effort, EPA identified 18 priority occupations, 12 technical competencies, and 12 cross-occupational competencies that are essential for the agency to accomplish its future mission. In addition, based on projected retirements and other attrition, EPA identified potential gaps in critical areas. Currently, the office is examining any ongoing resource planning efforts by EPA regional and program offices before moving ahead with its own planning process.

- *Options for an agency approach to workforce assessment.* EPA's Office of the Chief Financial Officer formed a work group in the fall of 2004 to improve the agency's tools for making decisions on distributing staffing resources. The work group is currently exploring options for how frequently to measure workload: doing a comprehensive assessment of all programs every 3 to 5 years or applying a screening tool to identify certain high-priority program areas for annual assessment.

Although EPA's workforce planning initiatives address, to varying degrees, some of the recommended practices for managing human capital, its efforts could be more effective. For example, both the Office of Enforcement and Compliance Assurance and the Office of Human Resources attempted to determine the types of skills they possess without first identifying the skills most needed to accomplish the agency's mission. As a result, these surveys may not necessarily capture the information EPA needs to comprehensively determine the skills gap. Although the Office of Human Resources followed up its skills survey by identifying priority occupations, needed competencies, and skill gaps for the agency as a whole, EPA characterized the effort as an assessment at the "20,000 foot" level. Human Resource officials acknowledged that the effort was not linked to a detailed analysis of workload and did not provide information on region- or program-specific workforce needs. To guide the office's development of ground-level analyses, during the spring of 2005, the office surveyed program and regional offices to determine the nature of any localized workforce planning. In addition, although officials involved in the two agencywide initiatives (sponsored by the Office of Human Resources and the Office of the Chief Financial Officer) were aware of the parallel efforts, we found little evidence that the two offices were coordinating with each other to avoid duplication or the adoption of conflicting strategies. Both these efforts are still in the early stages; coordinating now would allow the agency to ensure that it is making the best use of its resources.

Two other initiatives within the Office of Water, while not directly related to resource planning, could provide relevant and useful information for a

data-driven approach to budgeting and allocating resources. For example, beginning in December 1998, EPA and the states collaborated on a state resource analysis for water quality management to develop an estimate of the resources that states need to fully implement the Clean Water Act. The primary focus of the project was identifying the gap between states' needs and available resources. To develop the estimates of the gap, EPA and the states created a detailed model of activities associated with implementing the Clean Water Act, the average time it takes to complete such activities, and the costs of performing them.[14] The National Academy of Public Administration subsequently reviewed the model and determined that the underlying methodology was sound.[15] In fact, the academy recommended that EPA and the states refine the model to support data-driven grant allocation decisions. According to EPA and representatives of state environmental organizations, however, the agency has not implemented the recommendation because of resource constraints and reluctance on the part of some states.

Another initiative by the Office of Water, called the Permitting for Environmental Results Strategy, also has potential to provide useful information for more effective resource planning. This effort began in 2003, prompted by circumstances that were making it increasingly difficult for EPA and the states to meet their responsibilities under the Clean Water Act. According to EPA, not only had the scope and complexity of the act expanded over time, but the states were facing an increasing number of lawsuits and petitions to withdraw their authorization to administer some Clean Water Act programs. As part of its effort to identify and resolve performance problems in individual states, EPA and the states have been developing profiles containing detailed data on the responsibilities, resources, and workload demands of each state and region—information

[14]According to the project's interim report, issued in April 2002, the total estimated needs for states to fully implement the Clean Water Act ranged from $1.54 billion to $1.68 billion annually. Based on current spending levels, the report estimated an annual resource gap ranging from $735 million to $960 million.

[15]National Academy of Public Administration, *Understanding What States Need to Protect Water Quality* (Washington, D.C.: December 2002).

that could be useful in any comprehensive and systematic resource planning method.[16]

Challenges to Adopting a More Systematic Process for Allocating Resources Include Obtaining Reliable Workload Data and Overcoming Internal Resistance

Perhaps the most significant obstacle to developing a systematic, data-driven approach to resource allocation is ensuring that needed data on EPA's workload are complete and reliable. While our particular interest was Clean Water Act activities for controlling point and nonpoint source pollution, evidence suggests that EPA would encounter similar reliability concerns if a systematic resource allocation process were to be organized around strategic goals and objectives, thus encompassing other program areas.[17] Without comprehensive and reliable data on workload, EPA cannot accurately identify where agency resources, such as staff with particular skills, are most needed.

According to EPA officials, some of the key workload factors related to controlling point and nonpoint source pollution include the number of point source dischargers, the number of wet weather dischargers, and the quantity and quality of water in particular areas.[18] However, for some of this information, the relevant databases, such as the Permit Compliance System, which contains information on discharging facilities, and the National Water Quality Inventory, which contains information on water quality, have been subject to criticism from several sources, including GAO. For example:

- *Discrepancies between Permit Compliance System and state data.* In 2001, the Environmental Council of the States reported that of 42 states surveyed, more than 80 percent found "significant and pervasive data discrepancies" between data tracked by state authorities and data contained in the Permit Compliance System. Even among states that reported using EPA's database as their primary information system, 75

[16]Among other things, the profiles contain information on a wide range of activities that comprise state and regional workload, including monitoring water quality, permitting, inspecting permitted facilities, and taking enforcement actions. In collecting data for these profiles, the Office of Water also worked with states to resolve data quality problems.

[17]See, for example, GAO, *Environmental Information: EPA Needs Better Information to Manage Risks and Measure Results*, GAO-01-97T (Washington, D.C.: Oct. 3, 2000).

[18]EPA uses the term wet weather discharges to include sewer overflows, concentrated animal feeding operations, and storm water from municipal separate storm sewer systems and from industrial facilities.

percent found errors in the data. Another problem is that the last system modernization effort was in 1982; as a result, the database does not contain information on more recently regulated entities, such as storm water dischargers and concentrated animal feeding operations. The database also lacks complete information on the point source dischargers it does track, particularly smaller facilities and states' enforcement actions. Although at one time EPA linked states' grant funding to the submission of facility data to the database, the agency discontinued the policy. In addition, EPA does not require complete information on minor facilities.[19]

- *Lack of historical data in Permit Compliance System.* EPA's Permit Compliance System database does not provide sufficient information to evaluate trends in key workload indicators because the system overwrites older information whenever program officials enter new data on a facility. Thus, for example, EPA cannot generate trend data on the number of permits issued or renewed over a specified time period. After related criticism from EPA's Inspector General, Office of Water officials told us that, in 1999, they began pulling data from the system at regular intervals to provide data on trends in the agency's permitting backlog and the number of regulated facilities. At the same time, however, EPA began to clean up its inventory, eliminating data on facilities that were no longer in existence. Although the cleanup was necessary, it also affected the agency's ability to develop reliable trend data. For these and other reasons, EPA identified the Permit Compliance System as an agency weakness beginning in 1999.

- *Data limitations in the National Water Quality Inventory.* Data on the quality of the nation's waters, which EPA compiles and presents in the National Water Quality Inventory, are also subject to important limitations.[20] While the majority of states contributed data describing rivers and lakes, data on other types of water bodies were less comprehensive. For example, only nine states provided information on

[19]EPA classifies facilities (including municipal wastewater treatment plants and industrial and federal facilities) as major or minor, depending on the risk to the environment posed by the pollutants being discharged from the facility; the volume of pollutants being discharged; and, in the case of municipal wastewater treatment facilities, the size of the population being served.

[20]The most recent year for which the full National Water Quality Inventory is available is 2000. EPA has posted water quality information from the 2002 inventory for approximately 30 states on its Web site but has not yet issued the full inventory.

the status of their wetlands. In addition, states are only able to assess a portion of their waters every 2 years. For example, according to the 2000 report, states assessed 19 percent of the nation's total river and stream miles and 43 percent of the total lake, pond, and reservoir acres. Furthermore, states do not report data consistently. In 2002, GAO found that variations in the approaches that states use to assess water quality causes inconsistencies in the listing of impaired waters.[21] These inconsistencies also limit the ability to compare data from year to year.

While acknowledging that some data are missing from the Permit Compliance System, EPA officials told us that since 2001, they have worked with the states and regional offices to clean up the data and believe that their efforts have improved data quality. The officials also said that the system will be modernized into the Integrated Compliance Information System, which will be phased in beginning in 2006. According to information provided by EPA, the modernization effort will identify the data elements to be entered and maintained by the states and regions and will include additional data entry for minor facilities and special regulatory program areas, such as concentrated animal feeding operations, combined sewer overflows, and storm water. Regarding the National Water Quality Inventory, the Office of Water recently began advocating the use of standardized, probability-based, statistical surveys of state waters so that water quality information would be comparable both among states and from year to year.

We did not attempt to compile an exhaustive list of all factors that potentially affect EPA and state workload. Although the state water quality management resource analysis compiled a comprehensive list of activities performed in support of the Clean Water Act to serve as a basis for estimating the state resource needs, there is no similar analysis of workload indicators for EPA headquarters or regional offices. In addition to the factors discussed above, EPA officials and representatives of state environmental organizations identified other factors that directly or indirectly affect workload and thus could provide some indication of resource needs. Some factors were mentioned consistently by all or most of the officials we interviewed and other factors were cited less frequently. One of the challenges to improving data quality will be determining which of the workload indicators represent the most significant drivers of

[21]GAO, *Water Quality: Inconsistent State Approaches Complicate Nation's Efforts to Identify Its Most Polluted Waters*, GAO-02-186 (Washington, D.C.: Jan. 11, 2002).

resource needs. Making this determination, however, would also help EPA prioritize efforts to improve data quality.

More complete data are available on some of the workload factors identified by EPA and representatives of state environmental organizations, including the number of states authorized to implement aspects of the permitting program, the number of major and minor facilities, water quantity, and population. While these data may not be adequate in all respects, we believe the data are sufficiently reliable to illustrate potential differences in the regional distribution of workload. Appendix III contains a series of figures displaying selected workload indicators.

Even with better workload data, EPA would find it difficult to implement a systematic, data-driven approach to resource allocation without staff support for such a process. Support may not be easily forthcoming. According to EPA officials in several offices and regions, staff are reluctant to accept a data-driven approach because of their experience in using workload models during the 1980s. At that time, each major program office used a model to allocate resources to the agency's regional offices. When the models were initially developed, agency officials believed they were useful because EPA's programs were rapidly expanding as the Congress passed new environmental laws. Over time, however, the expansion of EPA's responsibilities leveled off, and its impact on the relative workload of regions was not as significant. The change in the rate of the workload expansion, combined with increasingly constrained federal resources during the late 1980s, meant that the workload models were only being used to allocate changes at the margins. The agency stopped using the models in the early 1990s because, according to officials, staff spent an unreasonable amount of time negotiating relatively minor changes in regional resources.

Officials at EPA headquarters and regional offices cited some of the same concerns when we asked about applying a more systematic approach to budgeting and allocating resources today. Officials in several offices maintained that such an approach would not be useful for the agency, in part because EPA would not obtain increased resources as a result. Because all programs have insufficient resources, officials explained, it would not necessarily be helpful to analyze where these resource gaps were largest. Some regional officials were more supportive of the use of workforce planning, particularly where officials believed the region was receiving fewer resources than it deserved relative to other regions. Regional officials also believed that this type of analysis would help them

manage the resources they get and could provide information that could stave off additional funding cuts or reduce how frequently headquarters officials implement new requirements for the regions.

EPA Has Not Developed a Detailed Estimate of the Cost to Implement the Clean Water Act, As Required

Section 516(b)(1)(A) of the Clean Water Act requires EPA, in cooperation with the states, to make a detailed estimate of the cost of carrying out the provisions of the act.[22] Such estimates must be reported to the Congress every 2 years. In response to our inquiries, EPA issued a letter on May 2, 2005, stating that the agency has been operating under the assumption that the requirement had expired as of December 1999. However, the letter acknowledged that the reporting requirement may have been reinstated. After studying the issue further, EPA issued a follow-up letter on May 16, 2005, which confirmed that the requirement had been reinstated and that the agency had been remiss in not producing reports due in 2003 and 2005.[23] EPA's letter was silent regarding the reports due in 1999 and prior years.

Even if EPA had been aware of the reporting requirement, it currently lacks the information needed to develop an estimate of the cost of carrying out the Clean Water Act. First, the process EPA uses to budget and allocate resources is built around available resources rather than an unconstrained budget. Second, EPA's budget structure and cost accounting systems do not provide specific detail on how EPA staff spend their time in carrying out Clean Water Act enforcement responsibilities within the Office of Enforcement and Compliance Assurance, where the budget is organized around activities that cut across all environmental media. Finally, as already described, EPA lacks complete and reliable data on key aspects of its Clean Water Act workload, making it difficult to develop sound cost estimates. Having better information on specific workload activities would not only help improve EPA's process for budgeting and allocating resources within its current budget structure, but it would also help EPA develop the cost estimates needed to comply with section 516(b)(1)(A).

[22]33 U.S.C. § 1375(b)(1)(A).

[23]The reporting requirement was eliminated by section 3003(a) of the Federal Reports Elimination and Sunset Act of 1995, which took effect on December 21, 1999. Section 302(a)(10) of the Great Lakes and Lake Champlain Act of 2002 reinstated the requirement as of November 27, 2002. No report was required in 2001.

Conclusions

Because EPA does not have a system in place to conduct periodic bottom-up assessments of the work that needs to be done, the distribution of the workload, or staff and other resource needs, the agency may be unable to respond effectively to changing needs and constrained resources. Despite some flexibility in budgeting and allocating resources, EPA cannot determine whether the amount and distribution of its resources are appropriate to effectively carry out its strategic goals and objectives or meet its responsibilities under the Clean Water Act and other environmental laws. Moreover, EPA does not have the information it needs to tailor reductions in staff or other resources in a manner that minimizes potential adverse impacts on its environmental programs.

Having complete and reliable data on the activities and tasks that must be accomplished—and how that work is distributed organizationally and geographically—will help EPA budget and allocate resources more effectively. In addition, such data will inform the agency's workforce planning efforts and help ensure that the right people with the right skills are where they need to be to get the work done.

EPA is obligated to meet its reporting responsibilities under section 516(b)(1) of the Clean Water Act. Periodic bottom-up assessments of the workload and related resource needs would give EPA the tools it needs to develop this detailed estimate, as required.

Recommendations for Executive Action

We recommend that the Administrator, EPA, identify the key workload indicators that drive resource needs, ensure that relevant data are complete and reliable, and use the results to inform the agency's budgeting and resource allocation.

Furthermore, to ensure that EPA is making the best use of resources dedicated to strategic workforce planning, we also recommend that EPA coordinate ongoing planning efforts across the agency to avoid duplication. EPA's workforce planning efforts should build on what the agency has accomplished thus far in identifying priority occupations, needed competencies, and skill gaps for the agency as a whole. As a next step, consistent with our 2001 recommendations, EPA should focus its efforts on a ground level assessment and identify (1) the agency's workload and skill needs; (2) the skills and deployment of existing staff, geographically and organizationally; and (3) strategies to fill identified gaps.

Finally, we recommend that EPA meet its reporting responsibilities under section 516(b)(1) of the Clean Water Act or seek appropriate relief from the Congress.

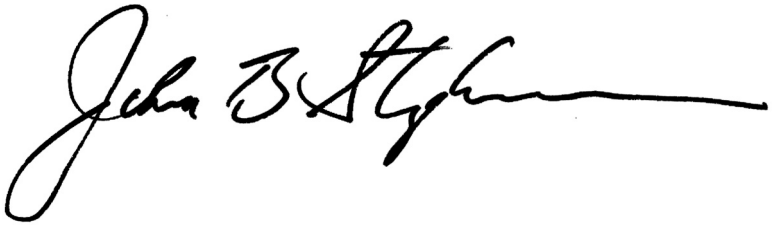
Agency Comments and Our Evaluations

We provided a draft of this report to EPA for review and comment. EPA agreed with our recommendation regarding its reporting responsibilities under section 516(b)(1) of the Clean Water Act and plans to respond according to the requirements of the law. While not addressing our recommendation on eliminating potential duplication of effort, EPA acknowledged that the workforce planning strategies we recommended can be effective tools for identifying and addressing future performance needs and stated that it has already initiated several of these efforts. EPA also noted that our report raises important issues affecting the distribution of constrained resources. However, the agency noted that its resource allocation decisions are based on performance and results and expressed concern that a bottom-up assessment of the underlying workload contrasted with its approach. We do not take issue with the use of performance and results in developing budgets and allocating resources, although, based on our review, EPA's budget and resource allocations were based primarily on historical precedent and, hence, year-to-year changes were marginal. Moreover, we believe our recommendation is fully compatible with an approach that links budgeting and resource allocation to performance goals and results. In our view, the agency's performance goals should be informed by an assessment of the underlying workload—and how the tasks that must be accomplished drive resource needs organizationally and geographically. Finally, EPA officials also provided a number of technical comments and clarifications, which we incorporated as appropriate. EPA's comments are in appendix IV.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to appropriate congressional committees; the Administrator, EPA; and the Director of the Office of Management and Budget. We also will 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 about this report, please contact me at (202) 512-3841 or stephensonj@gao.gov. Contact points for our Offices of

Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix V.



John B. Stephenson
Director, Natural Resources
and Environment

Scope and Methodology

We defined the scope of our review to include Clean Water Act programs for controlling pollution from point and nonpoint sources and related activities, such as setting water quality criteria and standards, for both specific pollutants and individual water bodies; monitoring water quality; and establishing requirements for the disposal of sewage sludge. We excluded (1) financial assistance for local infrastructure under the Clean Water State Revolving Fund; (2) activities for which the primary federal responsibility lay outside the Environmental Protection Agency (EPA), such as issuing permits for dredged and fill material, managed by the U.S. Army Corps of Engineers; and (3) location-specific programs, such as those focused on the Great Lakes, Chesapeake Bay, and designated sites under the National Estuary Program. We performed our work at EPA's Office of Congressional and Intergovernmental Relations; Office of the Chief Financial Officer; Office of Enforcement and Compliance Assurance; Office of General Counsel; Office of Human Resources; and Office of Water in EPA's Washington, D.C., headquarters. We also obtained information from four EPA regional offices located in Atlanta, Ga.; Boston, Mass.; Philadelphia, Pa.; and San Francisco, Calif. Our criteria for selecting these offices included differences in how the offices are organized to implement the Clean Water Act, differences in the factors that drive their workload, and geographic distribution.

For information on EPA's process for budgeting and allocating resources, we interviewed officials from the Office of the Chief Financial Officer and other EPA offices with responsibility for Clean Water Act programs to control pollution from point and nonpoint sources, including the Office of Congressional and Intergovernmental Relations, Office of Enforcement and Compliance Assurance, and Office of Water. Among other things, we reviewed relevant portions of EPA's strategic plan, budget data, and operating plan. We also obtained (1) estimates of the funding and staff years allocated to EPA's regional offices and (2) allotments to the states under two relevant grant programs. While these data may not be adequate in all respects, we determined that they were sufficiently reliable to illustrate differences in the relative share of resources across EPA's regional offices. In the four EPA regional offices selected for review, we discussed the budgeting and allocation process with cognizant officials.

For information on EPA's efforts to improve resource planning, we interviewed officials from EPA's Office of the Chief Financial Officer, Office of Enforcement and Compliance Assurance, Office of Human Resources, and Office of Water, as well as the Association of State and Interstate Water Pollution Control Administrators, the Environmental Council of States, and

the National Academy of Public Administration to identify such efforts and obtain relevant documents on their status and results. Officials from these entities and the four EPA regional offices selected for review also provided information on the challenges EPA faces in taking actions to improve resource planning. In particular, we researched sources of data for the workload factors identified by EPA officials and state environmental officials as among the key drivers of resource needs. For some factors, such as number of authorized states in EPA regions, states for which EPA has direct implementation responsibilities, population, and population growth, we determined that the data were sufficiently reliable for our purposes. Regarding other factors, such as number of facilities and water quality, we found the data to be incomplete or unreliable for certain states or regions, for certain years, or for certain types of facilities or water bodies. As a result, we were unable to analyze these data for workload trends or geographic distribution.[1] We found them sufficiently reliable to provide illustrative examples. To identify key elements of strategic workforce planning, we reviewed reports from GAO, EPA's Office of Inspector General, and the National Academy of Public Administration.

For information on EPA efforts to develop the detailed cost estimate required under section 516(b)(1)(A) of the Clean Water Act, we interviewed officials from EPA's Office of the Chief Financial Officer, Office of General Counsel, and Office of Water.

We conducted our work from August 2004 through July 2005 in accordance with generally accepted government auditing standards.

[1]See pages 19-21 for additional information on our efforts to assess data reliability for certain workload indicators.

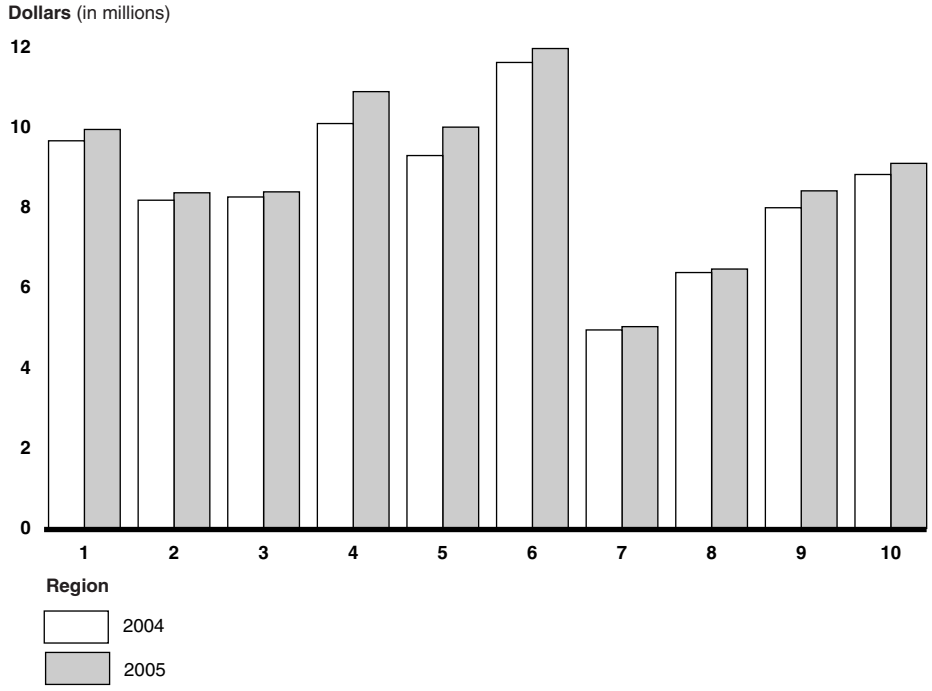
Information on Resources Allocated to EPA Regional Offices and States for Controlling Point and Nonpoint Source Pollution

Across the Environmental Protection Agency (EPA), the program offices track the funds and staff years dedicated to the goals and objectives laid out in the agency's strategic plan, down to a level of detail known as program projects. The plan's objectives generally contain multiple program projects and the reverse may also be true: an individual program project can contribute funds or staff years to multiple agency objectives. For example, within the Office of Water, most of the resources applicable to controlling point and nonpoint source pollution under the Clean Water Act are included under the program project called Surface Water Protection and the projects for categorical grants on Pollution Control (Section 106) and Nonpoint Source (Section 319). However, the Surface Water Protection program project contains resources for a broader range of activities than those included within our scope. At the same time, some of the resources that are relevant to controlling point and nonpoint source pollution are included in program projects that contain resources for other Clean Water Act and Safe Drinking Water Act-related activities.

We asked Office of Water officials to provide a regional breakdown of the funding contained in the Surface Water Protection program project (see fig. 2).[1] Fiscal years 2004 and 2005 are the only years for which consistent data are available because the program project for Surface Water Protection was created in 2004.

[1]EPA's regional offices are located in the following cities: Boston, Mass. (I); New York, N.Y. (II); Philadelphia, Pa. (III); Atlanta, Ga. (IV); Chicago, Ill. (V); Dallas, Tex. (VI); Kansas City, Mo. (VII); Denver, Colo. (VIII); San Francisco, Calif. (IX); and Seattle, Wash. (X).

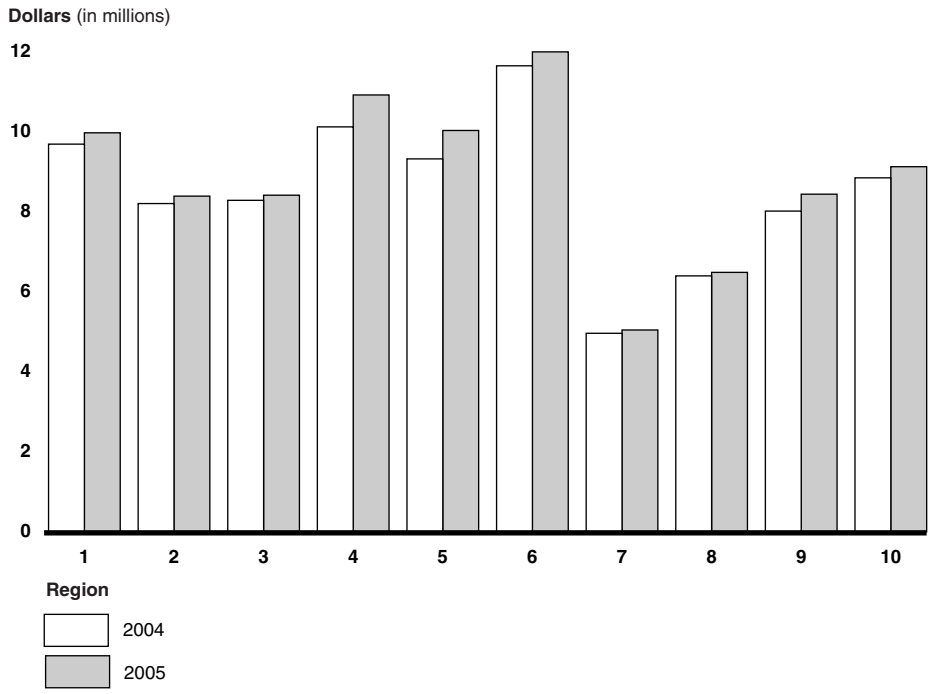
Figure 2: Allocation of Funding by the Office of Water under the Surface Water Protection Program Project, by EPA Region, in Fiscal Years 2004 and 2005



Source: EPA.

Figure 3 provides a similar breakdown in terms of regional staff years.

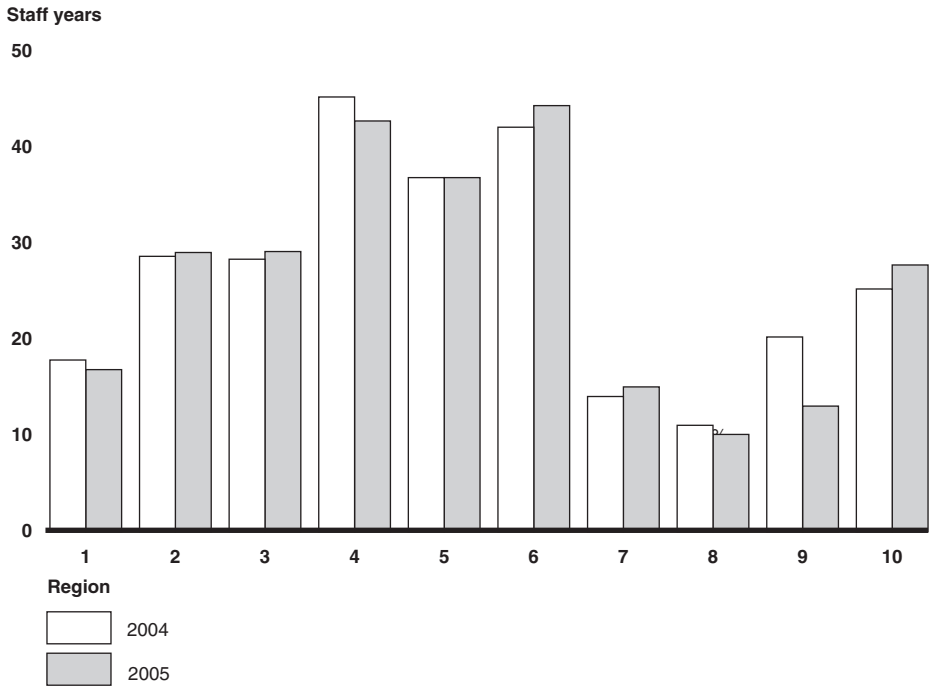
Figure 3: Allocation of Staff Years by the Office of Water under the Surface Water Protection Program Project, by EPA Region, in Fiscal Years 2004 and 2005



Source: EPA.

Within the Office of Enforcement and Compliance Assurance, it is difficult to isolate resources dedicated specifically to implementing the Clean Water Act or other environmental statutes because the office organizes its budget by program projects, such as compliance monitoring and civil enforcement, that cut across all environmental media. Beginning in fiscal year 2000, however, the office's budget officials asked the regional offices to provide a "best guess estimate" of the number of staff years devoted to particular program areas, including activities related to controlling point sources under the Clean Water Act. (See fig. 4.) The budget officials indicated that this exercise likely does not capture all relevant staff years and said that they did not verify the regional estimates. Fiscal years 2004 and 2005 were the only years for which complete data were available.

Figure 4: Estimated Staff Years from the Office of Enforcement and Compliance Assurance, by EPA Region, Dedicated to Controlling Point Sources under the Clean Water Act during Fiscal Years 2004 and 2005



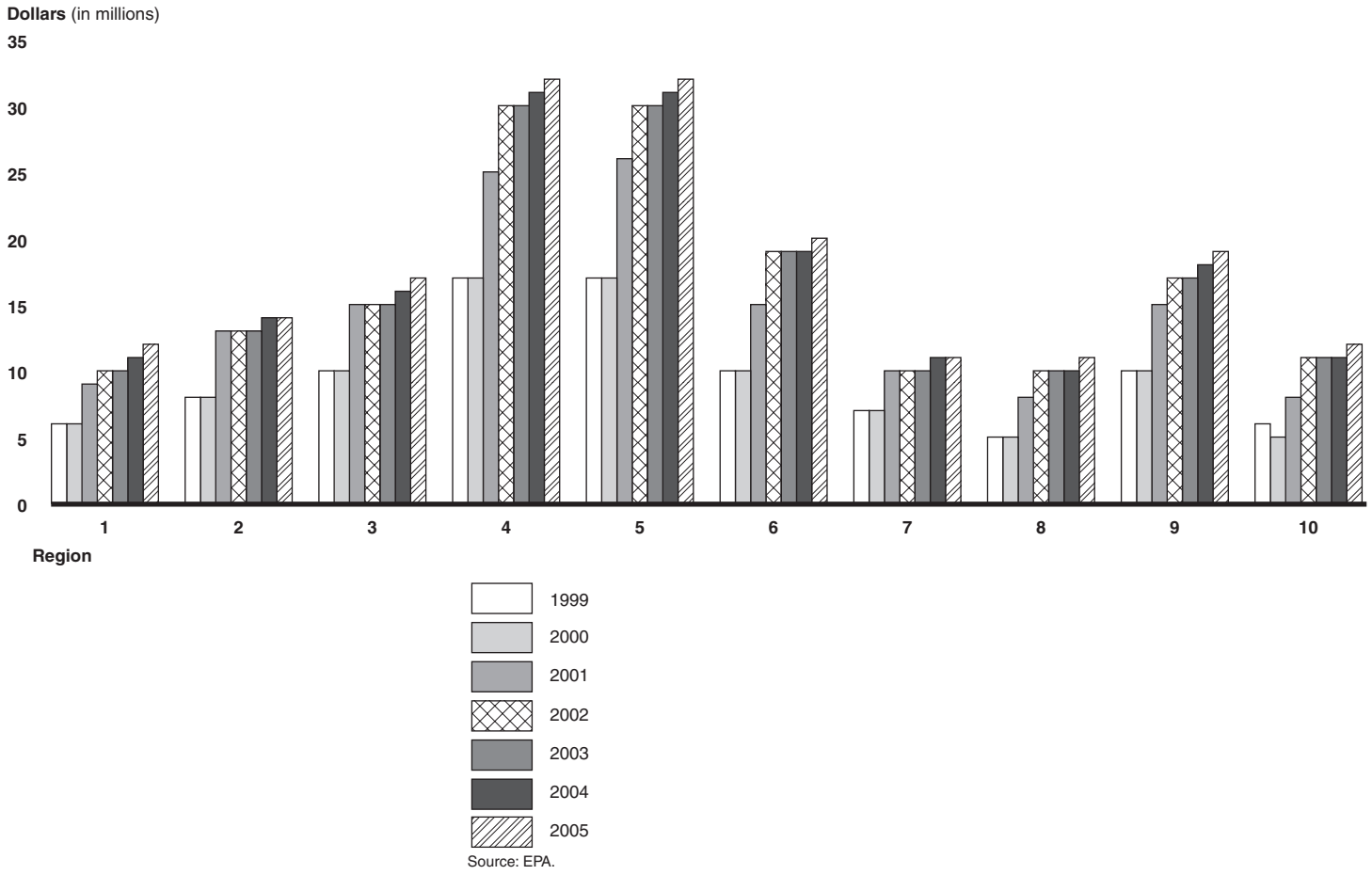
Source: EPA.

The Office of Enforcement and Compliance Assurance does not develop similar estimates for the amount of funding allocated to the regional offices. Although budget officials suggested that we could estimate regional spending based on the average cost of a staff year, regional officials said such an approach might be misleading because the cost of staff years varies from year to year and region to region.

The states receive annual allotments from the Office of Water under two major grant programs. Grants under section 106 of the Clean Water Act provide funds for water quality monitoring, regulating point source dischargers, and related activities. Grants under section 319(h) of the act fund the implementation of state programs for controlling pollution from nonpoint sources, such as agricultural runoff.[2] Figures 5 and 6 show allotments to the states, by region, under the program projects for Pollution Control (Section 106) and Nonpoint Source (Section 319).

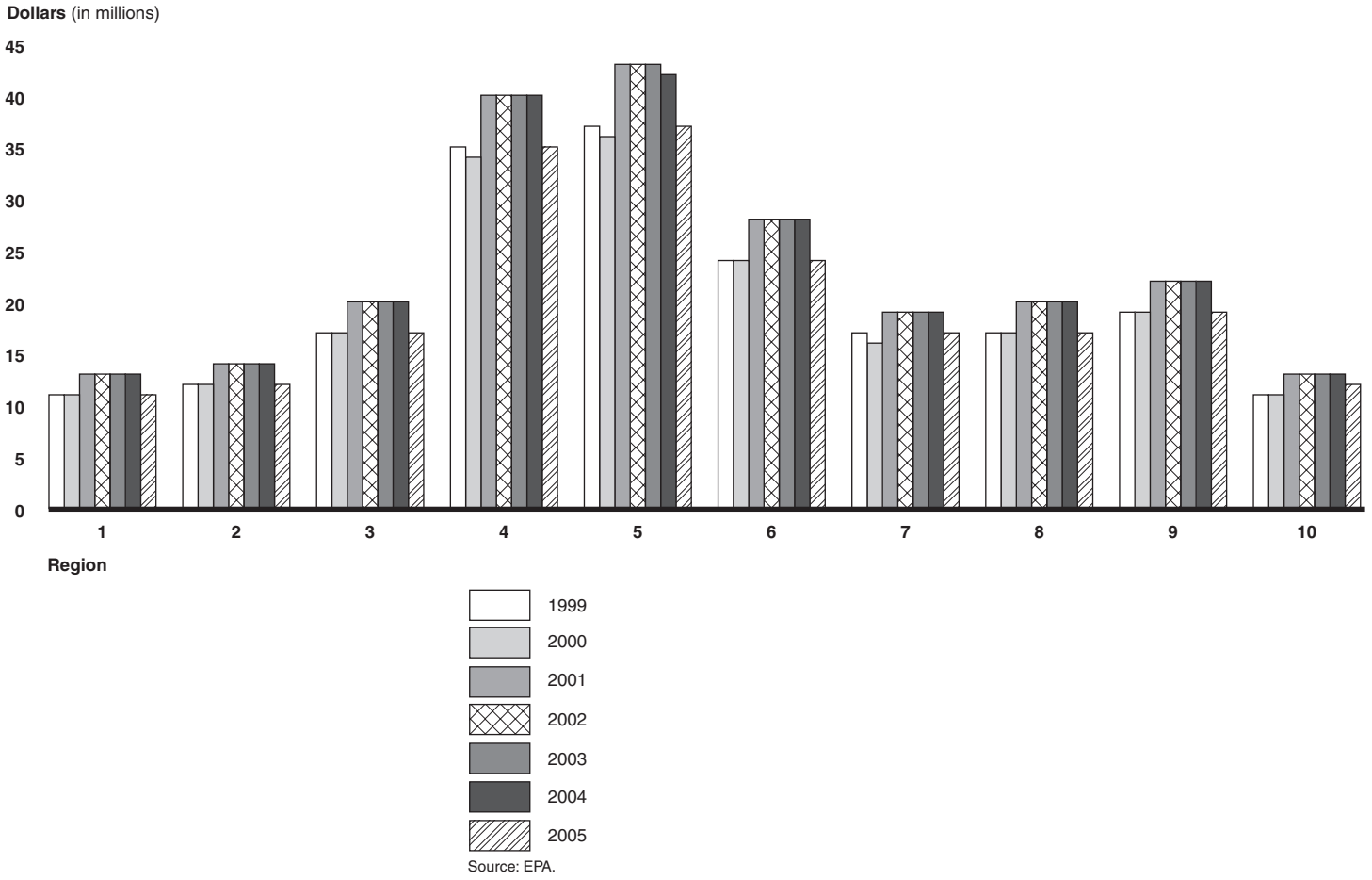
[2]33 U.S.C. §1329(h).

Figure 5: Allotments to States for Section 106 Grants, by EPA Region, for Fiscal Years 1999 to 2005



Source: EPA.

Figure 6: Allotments to States for Section 319 Grants, by EPA Region, for Fiscal Years 1999 to 2005



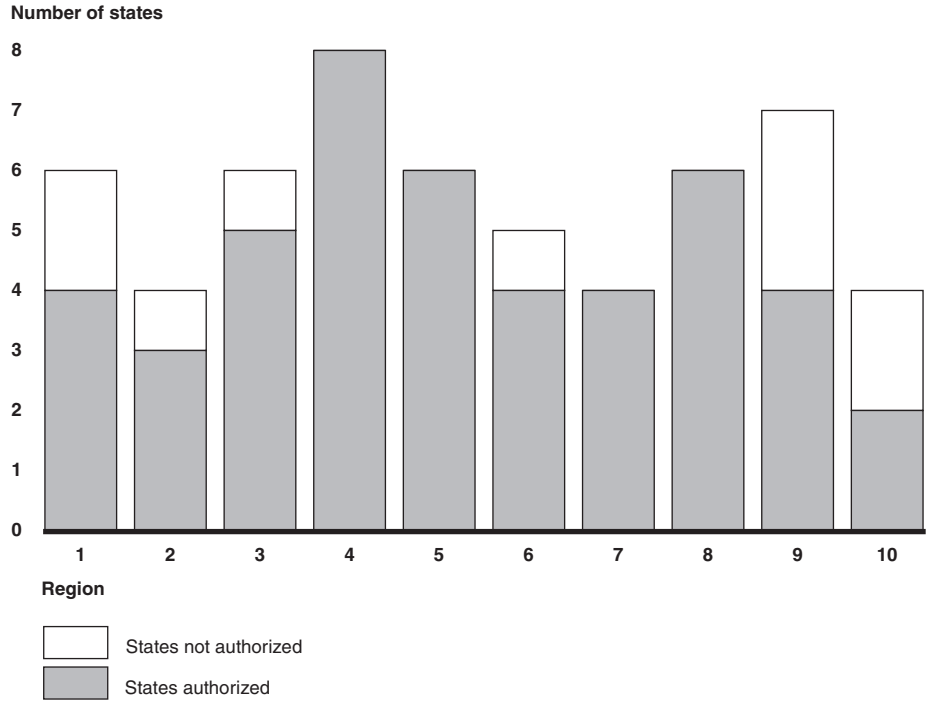
Source: EPA.

Information on Selected Workload Indicators Related to Controlling Point and Nonpoint Source Pollution

This appendix contains information on selected workload indicators for which the underlying data are sufficiently reliable to illustrate potential differences in the regional distribution of workload.

Figure 7 shows the number of states in each Environmental Protection Agency (EPA) region that are authorized to issue individual permits under the Clean Water Act and the number of states for which EPA retains direct implementation responsibility. The number of authorized states in a given region affects workload in several ways, including the number of staff devoted to oversight. When states are not authorized, regional officials have greater responsibilities, such as writing permits for regulated entities.

Figure 7: Number of States in Each EPA Region That Are Authorized to Issue Individual Permits and the Number of States Not Authorized

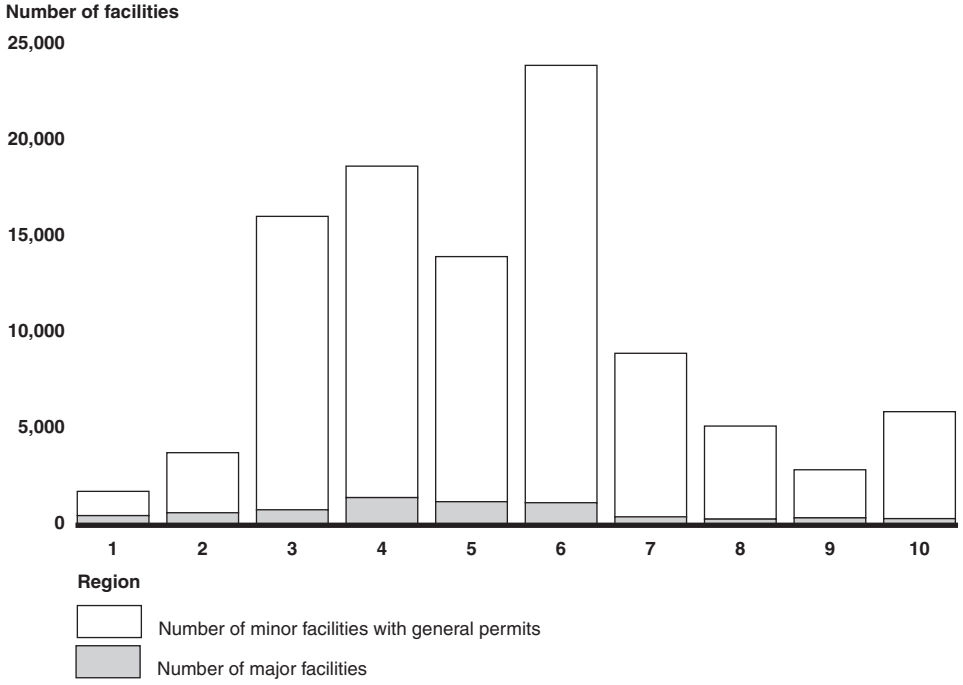


Source: EPA.

Note: Puerto Rico, which is unauthorized, and the U.S. Virgin Islands, which is authorized, are included in the count of states for region 2. The District of Columbia, which is unauthorized, is included in the count of states for region 3. American Samoa, Guam, and the Northern Mariana Islands, all of which are unauthorized, are included in the count of states for region 9. Tribal lands are not included for any region.

Figure 8 shows the regional distribution of major and minor facilities, including both municipal and industrial dischargers. Although these data are from EPA's Permit Compliance System, for which concerns about data reliability are significant, EPA officials believe that the information on the number of facilities is adequate.

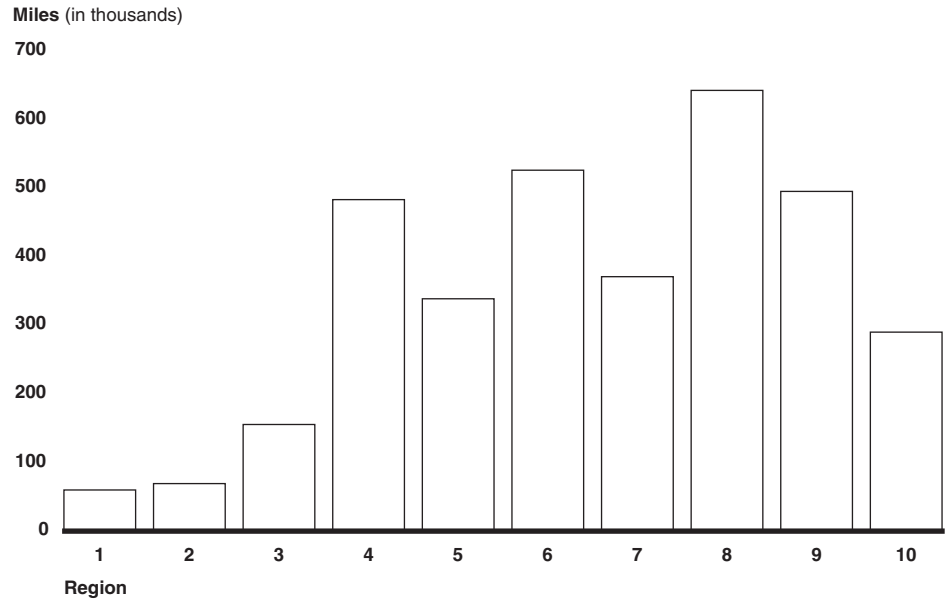
Figure 8: Number of Major and Minor Facilities, by EPA Region



Source: EPA.

One of the key workload indicators cited by EPA and representatives of state environmental organizations was the quantity of surface waters that must be assessed and monitored to obtain a complete picture of water quality. These assessments may, in turn, trigger other resource-intensive activities, such as establishing total maximum daily loads. Figures 9 and 10 portray the miles of rivers and streams and the acres of lakes in each EPA region, according to the 2002 update of the National Hydrography Dataset, which was first compiled by the U.S. Geological Survey in 1992.

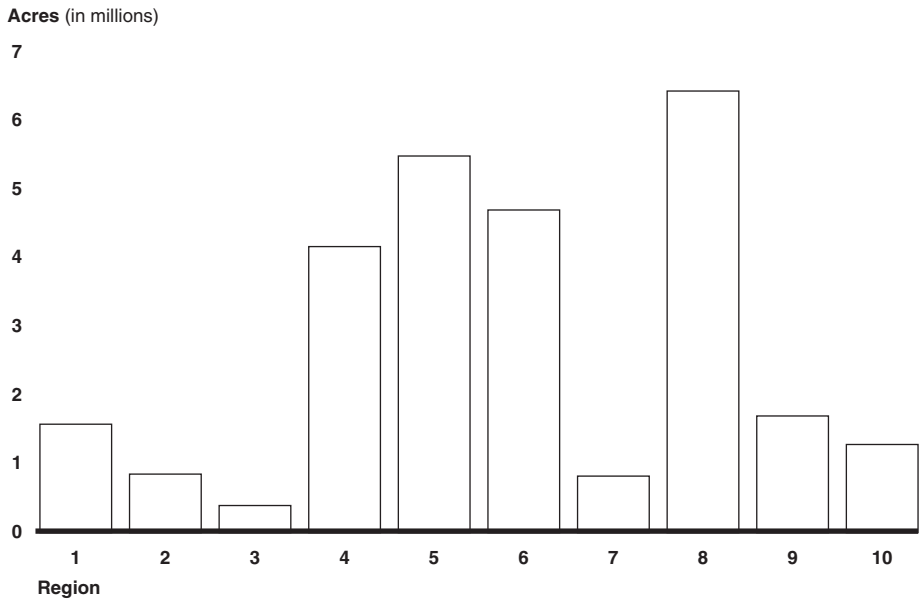
Figure 9: Total River and Stream Miles, by EPA Region



Source: EPA.

Note: Region 10 does not include data on miles of rivers and streams in Alaska.

Figure 10: Total Lake Acres, by EPA Region



Source: EPA.

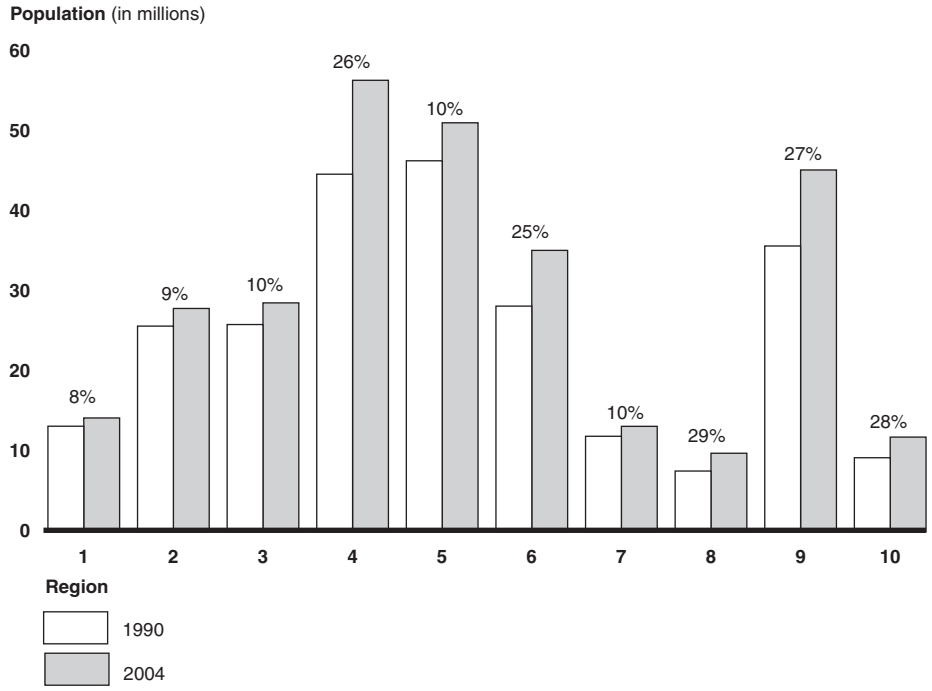
Note: Region 10 does not include data on acres of lakes in Alaska.

The National Hydrography Dataset does not contain detailed information on wetlands. The most recent information on wetlands was compiled in 1997 by the U.S. Fish and Wildlife Service. However, the information is no longer considered accurate because, for example, the Fish and Wildlife Service estimates that the United States loses 58,500 acres of wetlands annually.

EPA identified population and population growth as indirect indicators of workload, which are not necessarily linked to resource needs. For example, while a large population may indicate that the region has a large number of municipal wastewater treatment facilities, the population may be concentrated in a few large cities with centralized facilities, resulting in fewer individual facilities than otherwise expected. Similarly, growth in population might indicate that EPA and state staff will need to regulate more construction sites. However, the work required of environmental officials could vary depending on the number and size of these sites in each region. Figure 11 shows the census population estimates for the EPA regions for 1990 and 2004, along with the percentage increase in each

region.[1] We used 1990 as the starting point for this comparison because it was shortly after EPA abandoned the use of workload models in the late 1980s.

Figure 11: Percent Change in Population, by EPA Region, 1990-2004



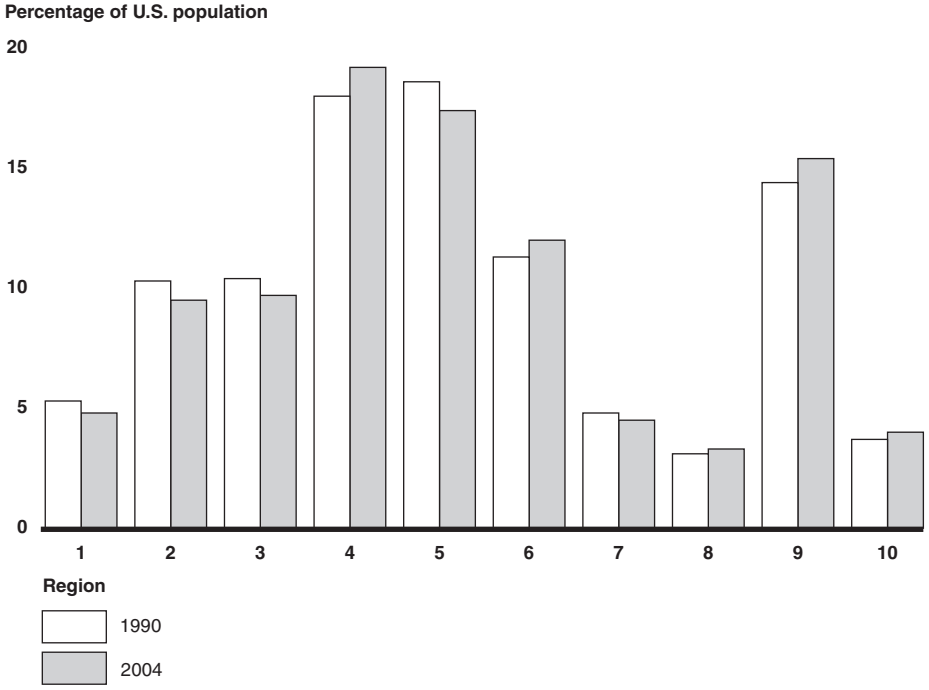
Source: Census.

Note: The District of Columbia is included in the population count for region 3.

Figure 12 presents a slightly different picture of the same population data. It shows the change in the relative share of the U.S. population in each region between 1990 and 2004.

[1]The 2004 census data are based on state estimates from 2004.

Figure 12: Change in Relative Share of U.S. Population, by EPA Region, 1990-2004



Source: Census.

Note: The District of Columbia is included in the population count for region 3.

Comments from the Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL - 1 2005

OFFICE OF THE
CHIEF FINANCIAL OFFICER

Mr. John Stephenson
Director
Natural Resources and Environment
Government Accountability Office
Washington, DC 20548

Dear Mr. Stephenson:

Thank you for the opportunity to review and comment on the Government Accountability Office (GAO) draft report, "Clean Water Act: Improved Resource Planning Would Help EPA Better Respond to Changing Needs and Fiscal Constraints." This report focuses on the current allocation of resources associated with implementing the Clean Water Act and describes and recommends analyses and administrative programs that would identify and address workload requirements and needs Agency-wide. The report cites important issues that affect the distribution of constrained resources, and EPA has been working to address them.

We are proud of EPA's accomplishments to date in integrating its planning and budgeting. Our 1997 Strategic Plan, the first the Agency developed under the Government Performance and Results Act, established a strategic architecture that allowed us to restructure our budget and more closely link planning and resource allocation. Our 2000 and 2003 strategic plans furthered this effort, and we continue to strengthen the linkage between planning, resources, and results as we conduct our annual planning and budgeting processes and begin to prepare our 2006 Strategic Plan. As GAO noted in its February 2005 Staff Study, "Performance Budgeting: Efforts to Restructure Budgets to Better Align Resources with Performance," EPA officials have said that the new budget structure better links budget resources to our strategic plan and highlights the program/project funding levels associated with achieving our goals and objectives. Successfully linking resources and planning to achieve improved performance provides a foundation for future strategies, such as improving workforce and human capital planning.

A critical component of EPA's planning and budgeting is assessing our past performance and future needs. In planning our work and determining resource allocations, Agency managers apply what they have learned from past performance—captured by such efforts as midyear performance reviews, Program Assessment Rating Tool (PART) assessments, and our annual Performance and Accountability Report—and determine what future performance is needed to achieve results. We understand that successfully carrying out our mission and achieving our goals depend on our ability to develop and sustain a highly skilled, adaptable, and results-oriented workforce with the right mix of technical expertise, experience, and leadership

capabilities. The workforce planning strategies that GAO has recommended can be effective tools for identifying and addressing future performance needs, and EPA has already initiated a number of these strategic workforce planning and human capital efforts.

However, I would like to clarify that it is EPA's approach that resource allocation decisions—including workforce deployment— include as a basis performance and results. EPA's resource planning process is results-driven, formulated on achieving our strategic goals, long-term objectives, and annual performance goals. We are concerned that GAO's recommendations appear to imply that key resource allocation decisions should be derived from a "bottom-up" analysis of workforce deployment indicators, rather than from an analysis of the performance needed to achieve strategic or annual outcomes. The Agency views improved performance and better environmental results as the primary driver for resource decisions. However, we believe that integrating workforce skill and competency strategies with workforce deployment is critical to achieving improved environmental performance.

We appreciate GAO's recognition of current EPA efforts to address improving workforce strategies. Specifically, current workload strategy activities involve the initial steps of collecting additional options for workload analysis from Federal and other government organizations, along with benchmarking information to guide our choices for assessing FTE resources. With these and future activities and goals in mind, EPA will address the concerns identified in the report and apply them to effectively allocating constrained resources to achieve Agency goals.

Finally, EPA agrees with GAO's recommendations regarding its reporting responsibilities under section 516(b)(1) of the Clean Water Act and will respond according to the requirements of the law.

Staff has provided you with technical comments on the report separately for consideration when preparing the final report.

Thank you for this opportunity to comment on the report.

Sincerely,

Benjamin Fredlich for

Michael W.S. Ryan
Deputy Chief Financial Officer

GAO Contact and Staff Acknowledgments

GAO Contact

John B. Stephenson (202) 512-3841

Staff Acknowledgments

In addition to the individual named above, Christine Bonham, Stephen Cleary, Ellen Crocker, Elizabeth Curda, Denise Fantone, Julian Klazkin, Krista Loose, Naved Qureshi, Lisa Shames, Carol Herrnstadt Shulman, Gregory Wilmoth, and Melissa Wolf made key contributions to this report.

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