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# CHESAPEAKE BAY PROGRAM

# Recent Actions Are Positive Steps Toward More Effectively Guiding the Restoration Effort

Statement of Anu K. Mittal, Director
Natural Resources and Environment

GAO-08-1033T

July 30, 2008

# CHESAPEAKE BAY PROGRAM

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**Highlights**

Highlights of GAO-08-1033T, a testimony before the Subcommittee on Water Resources and Environment, Committee on Transportation and Infrastructure, House of Representatives

### Why GAO Did This Study

The Chesapeake Bay Program (Bay Program) was created in 1983 when Maryland, Pennsylvania, Virginia, the District of Columbia, the Chesapeake Bay Commission, and the Environmental Protection Agency (EPA) agreed to establish a partnership to restore the Bay. The partnership's most recent agreement, *Chesapeake 2000*, sets out five broad goals to guide the restoration effort through 2010. This testimony summarizes the findings of an October 2005 GAO report (GAO-06-96) on (1) the extent to which measures for assessing restoration progress had been established, (2) the extent to which program reports clearly and accurately described the bay's health, (3) how much funding was provided for the effort for fiscal years 1995 to 2004, and (4) how effectively the effort was being coordinated and managed. It also summarizes actions taken by the program in response to GAO's recommendations. GAO reviewed the program's 2008 report to Congress and discussed recent actions with program officials.

### What GAO Recommends

In 2005, GAO recommended that the Bay Program complete efforts to develop and implement an integrated approach, revise its reports to improve their effectiveness and credibility, and develop a comprehensive, coordinated implementation strategy that takes into account available resources. GAO is not making new recommendations.

To view the full product, including the scope and methodology, click on GAO-08-1033T. For more information, contact Anu Mittal, (202) 512-3841, mittala@gao.gov.

### What GAO Found

In 2005, GAO found that the Bay Program had over 100 measures to assess progress toward meeting some restoration commitments and guide program management. However, the program had not developed an integrated approach that would translate these individual measures into an assessment of progress toward achieving the restoration goals outlined in *Chesapeake 2000*. For example, while the program had appropriate measures to track crab, oyster, and rockfish populations, it did not have an approach for integrating the results of these measures to assess progress toward its goal of protecting and restoring the bay's living resources. In response to GAO's recommendation, the Bay Program has integrated key measures into 3 indices of bay health and 5 indices of restoration progress.

In 2005, the reports used by the Bay Program did not provide effective and credible information on the health status of the bay. Instead, these reports focused on individual trends for certain living resources and pollutants, and did not effectively communicate the overall health status of the bay. These reports were also not credible because actual monitoring data had been commingled with the results of program actions and a predictive model, and the latter two tended to downplay the deteriorated conditions of the bay. Moreover, the reports lacked independence, which led to rosier projections of the bay's health than may have been warranted. In response to GAO's recommendations, the Bay Program developed a new report format and has tried to enhance the independence of the reporting process. However, the new process does not adequately address GAO's concerns about independence.

From fiscal years 1995 through 2004, the restoration effort received about $3.7 billion in direct funding from 11 key federal agencies; the states of Maryland, Pennsylvania, and Virginia; and the District of Columbia. These funds were used for activities that supported water quality protection and restoration, sound land use, vital habitat protection and restoration, living resources protection and restoration, and stewardship and community engagement. During this period, the restoration effort also received an additional $1.9 billion in funding from federal and state programs for activities that indirectly contribute to the restoration effort.

In 2005, the Bay Program did not have a comprehensive, coordinated implementation strategy to help target limited resources to those activities that would best achieve the goals outlined in *Chesapeake 2000*. The program was focusing on 10 key commitments and had developed numerous planning documents, but some of these documents were inconsistent with each other or were perceived as unachievable by the partners. In response to GAO's recommendations, the Bay Program has taken several actions, such as developing a strategic framework to unify planning documents and identify how it will pursue its goals. While these actions are positive steps, additional actions are needed before the program has the comprehensive, coordinated implementation strategy recommended by GAO.

Madam Chairwoman and Members of the Subcommittee:

I am pleased to be here today to participate in your second hearing focusing on the importance of protecting the health of our nation's great water bodies, such as the Chesapeake Bay. As you know, the Chesapeake Bay is the nation's largest estuary and has been recognized by Congress as a national treasure. In response to the deteriorating conditions of the bay, in 1983, the states of Maryland, Pennsylvania, and Virginia; the District of Columbia; the Chesapeake Bay Commission;[1] and the Environmental Protection Agency (EPA) first partnered to protect and restore the bay by establishing the Chesapeake Bay Program (Bay Program). Subsequent agreements in 1987, 1992, and 2000 reaffirmed the partners' commitment to bay restoration, and in their most recent agreement, *Chesapeake 2000*, which was signed in June 2000, they established 102 commitments organized under five broad restoration goals to be achieved by 2010.

In October 2005, we issued a report on the Chesapeake Bay restoration effort that addressed (1) the extent to which the Bay Program had established appropriate measures for assessing restoration progress, (2) the extent to which the reporting mechanisms the Bay Program used clearly and accurately described the bay's overall health, (3) how much funding had been provided by federal and state partners for restoring the Chesapeake Bay for fiscal years 1995 through 2004 and for what purposes, and (4) how effectively the restoration effort had been coordinated and managed.[2]

Our report included six recommendations—one recommendation to develop and implement an integrated approach to measure overall progress, three recommendations to enhance the effectiveness and credibility of the Bay Program's public reporting, and two recommendations to improve the management and coordination of the restoration effort. Since our report was issued, the Bay Program, with the encouragement of Congress, has been taking steps to address the findings and recommendations we identified in our 2005 report. My testimony today will therefore cover the concerns we raised in 2005, the recommendations that we made to address these concerns, and our

[1]The Chesapeake Bay Commission is a tristate legislative assembly representing Maryland, Pennsylvania, and Virginia.

[2]GAO, *Chesapeake Bay Program: Improved Strategies Are Needed to Better Assess, Report, and Manage Restoration Progress*, GAO-06-96 (Washington, D.C.: Oct. 28, 2005).

assessment of the steps that the Bay Program has taken to address our recommendations.

For our 2005 report, we reviewed planning and program implementation documents and funding data from Bay Program partners. We also convened a panel of nationally recognized ecosystem restoration and assessment experts. For the 2005 report, we conducted our work from October 2004 to October 2005 in accordance with generally accepted government auditing standards. For this testimony statement, we updated our 2005 report by assessing the progress that the Bay Program has made in implementing our recommendations. We reviewed Bay Program documents, such as a July 2008 report to Congress, entitled *Strengthening the Management, Coordination, and Accountability of the Chesapeake Bay Program* and the Bay Program's Scientific and Advisory Committee bylaws and operational guidance. We also looked at partners' activities and funding data in the new Bay Program database, and spoke with officials at EPA's Chesapeake Bay Program Office. We conducted our work in July 2008 in accordance with generally accepted government auditing standards. These standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In summary:

- In 2005, we reported that the Bay Program had established over 100 measures to assess progress toward meeting some of its commitments and provide information to guide management decisions. For example, the program had measures for assessing trends in various living resources such as oysters and crabs, and pollutants such as nitrogen and phosphorus levels. However, the program had not developed an approach that would allow it to integrate all of these measures and thereby assess the progress made by the overall restoration effort in achieving the five goals outlined in *Chesapeake 2000*. We recommended that the Bay Program develop such an approach, which would allow the program to combine its individual measures into a few broader-scale measures that it could then use to assess key ecosystem attributes and present an overall assessment of this complex ecosystem restoration project. In response to our recommendation, the Bay Program integrated key measures to develop three indices of bay health and five indices of restoration progress and has used these indices to present overall assessments of the health of the bay and the restoration effort. We believe that these new indices will allow the

Bay Program to provide a better overall assessment of the bay's health and the restoration progress.

- In 2005, we also found that the Bay Program's primary mechanism for reporting on the health status of the bay—the *State of the Chesapeake Bay* report—did not provide an effective or credible assessment of the bay's current health status. These reports were not effective because, like the program's measures, they focused on individual species and pollutants instead of providing an overall assessment of the bay's health. Often, these reports showed diverging trends for certain aspects of the ecosystem, making it difficult for the public and other stakeholders to determine what the current condition of the bay really was. These reports were also not credible because they (1) commingled data on the bay's health with program actions and modeling results, which tended to downplay the deteriorated conditions of the bay and (2) were not subject to an independent review process. As a result, we concluded that the Bay Program reports may have been projecting a rosier picture of the health of the bay than may have been warranted. In response to our recommendations, the Bay Program took several steps to improve the effectiveness and credibility of its reports. However, we believe the Bay Program can take additional steps to establish an independent peer review process that will enhance the credibility and objectivity of its reports.

- For fiscal years 1995 through 2004, we reported that about $3.7 billion in direct funding was provided for the Chesapeake Bay restoration effort by 11 key federal agencies; the states of Maryland, Pennsylvania, and Virginia; and the District of Columbia.[3] An additional $1.9 billion was provided for activities that had an indirect impact on bay restoration. Although we did not make any recommendations about the need to collect and aggregate information on the amount of funding contributed by the various partners to the effort, since we issued our report, the Bay Program has set up a formal data collection effort. The Bay Program has established a Web-based system for collecting information from its partners on the amount and source of funding being used and planned for restoration activities.

[3]Key federal agencies include the U.S. Department of Agriculture's Farm Service Agency, Forest Service, and Natural Resources Conservation Service; Department of Commerce's National Oceanic and Atmospheric Administration; Department of Defense's Army, Army Corps of Engineers, and Navy/Marine Corps; Department of the Interior's Fish and Wildlife Service, U.S. Geological Survey, and National Park Service; and EPA. For purposes of our report and this testimony, we defined direct funds as those that are provided exclusively for bay restoration activities (e.g., increasing the oyster population) or those that would no longer be made available in the absence of the restoration effort.

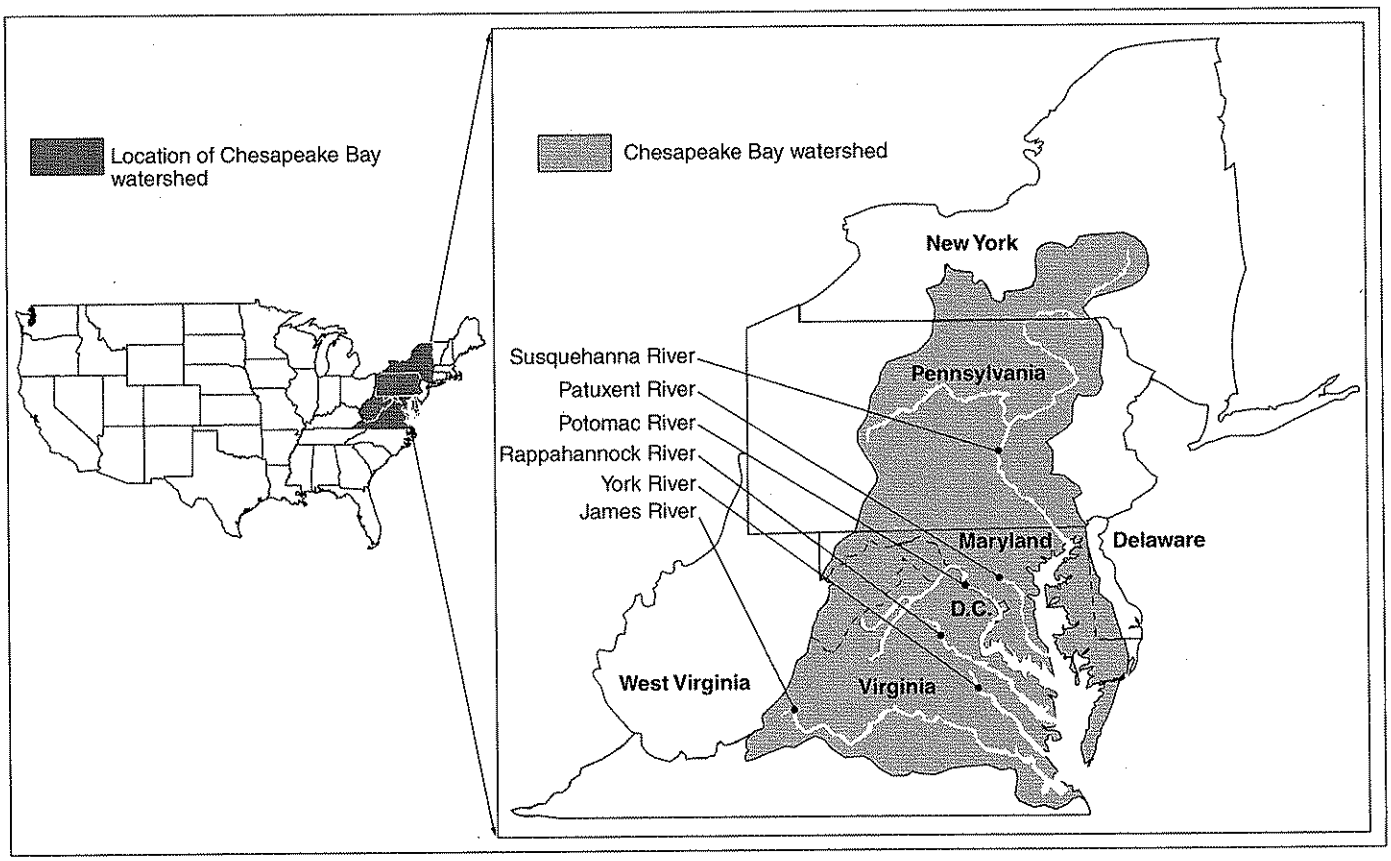
- Finally, in 2005 we reported that the Bay Program did not have a comprehensive, coordinated implementation strategy that would allow it to strategically target limited resources to the most effective restoration activities. Recognizing that it could not manage all 102 commitments outlined in *Chesapeake 2000*, the Bay Program had focused its efforts on 10 keystone commitments. We also found that although the Bay Program had developed numerous planning documents, some of these documents were inconsistent with each other and some of the plans were perceived to be unachievable by stakeholders. Moreover, the program invested scarce resources in developing and updating certain plans, even though it knew that it did not have the resources to implement them. While we recognized that the Bay Program often had no assurance about the level of funds that may be available beyond the short term, we concluded that this large and difficult restoration project cannot be effectively managed and coordinated without a realistic strategy that unifies all of its planning documents and targets its limited resources to the most effective restoration activities. In response to our recommendations, the Bay Program has taken several actions to improve the coordination and management of the restoration effort, such as developing a strategic framework to articulate how the partnership will pursue its goals. While these actions appear to be positive steps in the right direction, we believe that additional actions, such as identifying resources and assigning accountability to partners for implementing the strategy, are needed for the Bay Program to move forward in a more strategic and well-coordinated manner.

We discussed our assessment of the Bay Program's actions taken in response to our recommendations with program officials. Based on this discussion, we incorporated technical changes to this statement.

# Background

The Chesapeake Bay is the largest of the nation's estuaries, measuring nearly 200 miles long and 35 miles wide at its widest point. Roughly half of the bay's water comes from the Atlantic Ocean, and the other half is freshwater that drains from the land and enters the bay through the many rivers and streams in its watershed basin. As shown in figure 1, the bay's watershed covers 64,000 square miles and spans parts of six states—Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia—and the District of Columbia.

**Figure 1: Chesapeake Bay Watershed**




Sources: Chesapeake Bay Program Office and GAO.

Over time, the bay's ecosystem has deteriorated. The bay's "dead zones"—where too little oxygen is available to support fish and shellfish—have increased, and many species of fish and shellfish have experienced major

declines in population. The decline in the bay's living resources has been cause for a great deal of public and political attention.

Responding to public outcry, on December 9, 1983, representatives of Maryland, Pennsylvania, and Virginia; the District of Columbia; EPA; and the Chesapeake Bay Commission signed the first Chesapeake Bay agreement. Their agreement established the Chesapeake Executive Council and resulted in the Chesapeake Bay Program—a partnership that directs and conducts the restoration of the bay. The signatories to the agreement reaffirmed their commitment to restore the bay in 1987 and again in 1992. The partners signed the most current agreement, *Chesapeake 2000*, on June 28, 2000. *Chesapeake 2000*—identified by the Bay Program as its strategic plan—sets out an agenda and goals to guide the restoration efforts through 2010 and beyond. In *Chesapeake 2000*, the signatories agreed to 102 commitments—including management actions, such as assessing the trends of particular species, as well as actions that directly affect the health of the bay. These commitments are organized under the following five broad restoration goals:

- *Protecting and restoring living resources*—14 commitments to restore, enhance, and protect the finfish, shellfish and other living resources, their habitats and ecological relationships to sustain all fisheries and provide for a balanced ecosystem;

- *Protecting and restoring vital habitats*—18 commitments to preserve, protect, and restore those habitats and natural areas that are vital to the survival and diversity of the living resources of the bay and its rivers;

- *Protecting and restoring water quality*—19 commitments to achieve and maintain the water quality necessary to support the aquatic living resources of the bay and its tributaries and to protect human health;

- *Sound land use*—28 commitments to develop, promote, and achieve sound land use practices that protect and restore watershed resources and water quality, maintain reduced pollutant inputs to the bay and its tributaries, and restore and preserve aquatic living resources; and

- *Stewardship and community engagement*—23 commitments to promote individual stewardship and assist individuals, community-based organizations, businesses, local governments, and schools to undertake initiatives to achieve the goals and commitments of the agreement.

As the only federal signatory to the Chesapeake Bay agreements, EPA is responsible for spearheading the federal effort within the Bay Program through its Chesapeake Bay Program Office. Among other things, the Chesapeake Bay Program Office is to develop and make available information about the environmental quality and living resources of the Chesapeake Bay ecosystem; help the signatories to the Chesapeake Bay agreement develop and implement specific plans to carry out their responsibilities; and coordinate EPA's actions with those of other appropriate entities to develop strategies to improve the water quality and living resources in the Chesapeake Bay ecosystem.

## The Bay Program Has Developed an Integrated Approach to Better Assess Overall Restoration Progress

In October 2005, we found that the Bay Program had established 101 measures to assess progress toward meeting some restoration commitments and provide information to guide management decisions. For example, the Bay Program had developed measures for determining trends in individual fish and shellfish populations, such as crabs, oysters, and rockfish. The Bay Program also had a measure to estimate vehicle emissions and compare them to vehicle miles traveled to help establish reduction goals for contaminants found in these emissions.

While the Bay Program had established these 101 measures, we also found that it had not developed an approach that would allow it to translate these individual measures into an overall assessment of the progress made in achieving the five broad restoration goals. For example, although the Bay Program had developed measures for determining trends in individual fish and shellfish populations, it had not yet devised a way to integrate those measures to assess the overall progress made in achieving its *Living Resource Protection and Restoration* goal. According to an expert panel of nationally recognized ecosystem assessment and restoration experts convened by GAO, in a complex ecosystem restoration project like the Chesapeake Bay, overall progress should be assessed by using an integrated approach. This approach should combine measures that provide information on individual species or pollutants into a few broader-scale measures that can be used to assess key ecosystem attributes, such as biological conditions.

According to an official from the Chesapeake Bay Program Office, the signatories to the Chesapeake Bay agreement had discussed the need for an integrated approach for several years, but until recently it was generally not believed that, given limited resources, the program could develop an approach that was scientifically defensible. The program began an effort in November 2004 to develop, among other things, a framework for

organizing the program's measures and a structure for how the redesign work should be accomplished. In our 2005 report, we recommended that the Chesapeake Bay Program Office complete its efforts to develop and implement such an integrated approach.

In response to our recommendation, a Bay Program task force identified 13 key indicators for measuring the health of the bay and categorized these indicators into 3 indices of bay health. With the development of these indices, the Bay Program should be in a better position to assess whether restoration efforts have improved the health of the bay. These indices will also help the Bay Program determine whether changes are needed to its planned restoration activities. The task force also identified 20 key indicators for measuring the progress of restoration efforts and categorized these indicators into 5 indices of restoration efforts. According to the Bay Program, these indices are now being used to assess and report on the overall progress made in restoring the bay's health and in implementing restoration efforts. The Bay Program has linked these restoration effort indices to the overall restoration goals and this should help the program better evaluate the progress it has made toward meeting the overall goals.

## The Bay Program Has Improved Report Formats but Has Not Taken Adequate Steps to Enhance the Independence of the Reporting Process

In 2005, we determined that the Bay Program's primary mechanism for reporting on the health status of the bay—the *State of the Chesapeake Bay* report—did not effectively communicate the current health status of the bay. This was because it mirrored the shortcomings in the program's measures by focusing on the status of individual species or pollutants instead of providing information on a core set of ecosystem characteristics. For example, the 2002 and 2004 *State of the Chesapeake Bay* reports provided data on oysters, crab, rockfish, and bay grasses, but the reports did not provide an overall assessment of the current status of living resources in the bay or the health of the bay. Instead, data were reported for each species individually. The 2004 *State of the Chesapeake Bay* report included a graphic that depicted oyster harvest levels at historic lows, with a mostly decreasing trend over time, and a rockfish graphic that showed a generally increasing population trend over time. However, the report did not provide contextual information that explained how these measures were interrelated or what the diverging trends meant about the overall health of the bay. The experts we consulted agreed that the 2004 report was visually pleasing but lacked a clear, overall picture of the bay's health and told us that the public would probably not be able to easily and accurately assess the current condition of the bay from the information reported.

We also found that the credibility of the *State of the Chesapeake Bay* reports had been undermined by two key factors. First, the Bay Program had commingled data from three sources when reporting on the health of the bay. Specifically, the reports mixed actual monitoring information on the bay's health status with results from a predictive model and the progress made in implementing specific management actions, such as acres of wetlands restored. The latter two results did little to inform readers about the current health status of the bay and tended to downplay the bay's actual condition. Second, the Bay Program had not established an independent review process to ensure that its reports were accurate and credible. The officials who managed and were responsible for the restoration effort also analyzed, interpreted, and reported the data to the public. We believe this lack of independence in reporting led to the Bay Program's projecting a rosier view of the health of the bay than may have been warranted. Our expert panelists also told us that an independent review panel—to either review the bay's health reports before issuance or to analyze and report on the health status independently of the Bay Program—would significantly improve the credibility of the program's reports.

In 2005, we recommended that the Chesapeake Bay Program Office revise its reporting approach to improve the effectiveness and credibility of its reports by (1) including an assessment of the key ecological attributes that reflect the bay's current health conditions, (2) reporting separately on the health of the bay and on the progress made in implementing management actions, and (3) establishing an independent and objective reporting process.

In response to our recommendation that reports should include an ecological assessment of the health of the bay, the Bay Program has developed and used a set of 13 indicators of bay health to report on the key ecological attributes representing the health of the bay. In response to our recommendation that the program should separately report on the health of the bay and management actions, the Bay Program has developed an annual reporting process that distinguishes between ecosystem health and restoration effort indicators in its annual report entitled *Chesapeake Bay Health and Restoration Assessment.* The most recent report, entitled *Chesapeake Bay 2007 Health and Restoration Assessment,* is divided into four chapters: chapter one is an assessment of ecosystem health, chapter two describes factors impacting bay and watershed health, chapter three is an assessment of restoration efforts, and chapter four provides a summary of local water quality assessments. We believe that the new report format is a more effective communications

framework and clearly distinguishes between the health of the bay and management actions being taken.

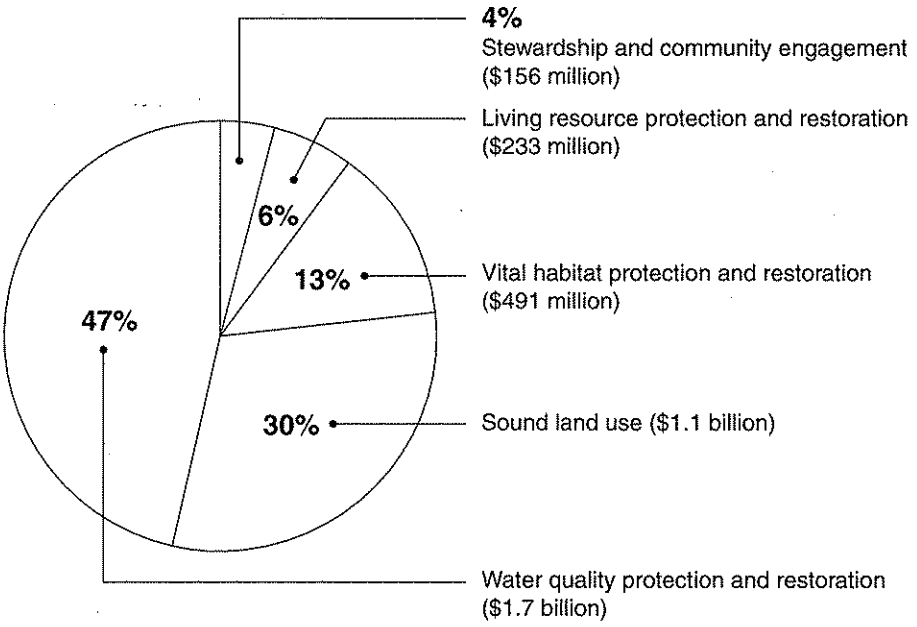
In response to our recommendation to establish an independent and objective reporting process, the Bay Program has charged its Scientific and Technical Advisory Committee with responsibility for assuring the scientific integrity of the data, indicators, and indices used in the Bay Program's publications. In addition, the Bay Program instituted a separate reporting process on the bay's health by the University of Maryland Center for Environmental Science. This report, which is released on the same day as the Bay Program's release of the Chesapeake Bay Health and Restoration Assessment, provides an assessment of the bay's health in a report card format. While we recognize that the changes are an improvement over the reporting process that was in place in 2005, we remain concerned about the lack of independence in the process. Although members of the Scientific and Technical Advisory Committee are not managing the day-to-day program activities, this committee is a standing committee of the Bay Program and provides input and guidance to the Bay Program on how to develop measures to restore and protect the Chesapeake Bay. In addition, we do not believe that the report card prepared by the University of Maryland Center for Environmental Science is as independent as the Bay Program believes, because several members of the Scientific and Technical Advisory Committee are also employees of the University of Maryland Center for Environmental Science. We therefore continue to believe that establishing a more independent reporting process would enhance the credibility and objectivity of the Bay Program's reports.

## Federal Agencies and States Provided Billions of Dollars in Both Direct and Indirect Funding for Restoration Activities

From fiscal years 1995 through 2004, we reported that 11 key federal agencies; the states of Maryland, Pennsylvania, and Virginia; and the District of Columbia provided almost $3.7 billion in direct funding to restore the bay. Federal agencies provided a total of approximately $972 million in direct funding, while the states and the District of Columbia provided approximately $2.7 billion in direct funding for the restoration effort over the 10-year period. Of the federal agencies, the Department of Defense's U.S. Army Corps of Engineers provided the greatest amount of direct funding—$293.5 million. Of the states, Maryland provided the greatest amount of direct funding—more than $1.8 billion—which is over $1.1 billion more than any other state. Typically, the states provided about 75 percent of the direct funding for restoration, and the funding has generally increased over the 10-year period. As figure 2 shows, the largest

percentage of direct funding—approximately 47 percent—went to water quality protection and restoration.

**Figure 2: Percentage of the Total Direct Funding Provided for Addressing Each of the Five *Chesapeake 2000* Goals, Fiscal Years 1995 through 2004**



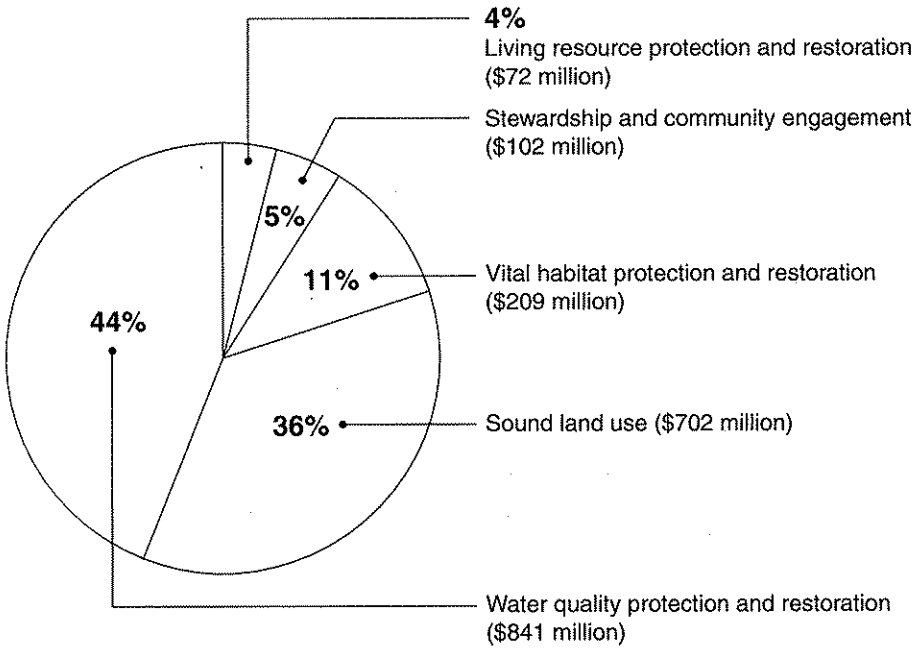

Source: GAO analysis of agency data, in constant 2004 dollars.

We also reported that 10 of the key federal agencies, Pennsylvania, and the District of Columbia provided about $1.9 billion in additional funding from fiscal years 1995 through 2004 for activities that indirectly affect bay restoration. These activities were conducted as part of broader agency efforts and/or would continue without the restoration effort. Federal agencies provided approximately $935 million in indirect funding, while Pennsylvania and the District of Columbia together provided approximately $991 million in indirect funding for the restoration effort over the 10-year period. [4] Of the federal agencies, the U.S. Department of Agriculture provided the greatest amount of indirect funding—$496.5 million—primarily

[4]In addition to the funding provided for the restoration of the bay, EPA provided more than $1 billion to Maryland, Pennsylvania, and Virginia through its Clean Water State Revolving Fund program during fiscal years 1995 through 2004. The funds provide low-cost loans or other financial assistance for a wide range of water quality infrastructure projects and other activities, such as implementing agricultural best management practices.

through its Natural Resources Conservation Service. Of the states, Pennsylvania provided the greatest amount of indirect funding—$863.8 million. As with direct funding, indirect funding for the restoration effort had also generally increased over fiscal years 1995 through 2004. As figure 3 shows, the largest percentage of indirect funding—approximately 44 percent—went to water quality protection and restoration.

**Figure 3: Percentage of the Total Indirect Funding Provided for Addressing Each of the Five *Chesapeake 2000* Goals, Fiscal Years 1995 through 2004**




Source: GAO analysis of agency data, in constant 2004 dollars.

Despite the almost $3.7 billion in direct funding and more than $1.9 billion in indirect funding that had been provided to restore the bay, the Chesapeake Bay Commission estimated in a January 2003 report that the restoration effort faced a funding gap of nearly $13 billion to achieve the goals outlined in *Chesapeake 2000* by 2010. Subsequently, in an October 2004 report, the Chesapeake Bay Watershed Blue Ribbon Finance Panel estimated that the restoration effort is grossly underfunded and recommended that a regional financing authority be created with an initial

capitalization of $15 billion, of which $12 billion would come from the federal government.[5]

Although we did not recommend that the Bay Program consider developing a formal process for collecting and aggregating information on the amount of funding provided by the various restoration partners, the program has developed a database to capture this information. Recognizing the need to centrally and consistently account for the activities and funding sources of all Bay Program partners, the program created a Web-based form to collect information on the amount and source of funding being used and planned for restoration activities. Currently, the Bay Program has collected funding data for 2007 through 2009. However, according to the Bay Program, only the 2007 data—totaling $1.1 billion—represents a comprehensive, quality data set, and the program has plans to improve this database by having additional partners provide data and increasing the scope and quality of the information.

## The Bay Program Has Established a Strategic Framework but Key Elements to More Effectively Coordinate and Manage the Restoration Effort Are Still Needed

In our 2005 report we found that although *Chesapeake 2000* provides the current vision and overall strategic goals for the restoration effort, along with short- and long-term commitments, the Bay Program lacked a comprehensive, coordinated implementation strategy that could provide a road map for accomplishing the goals outlined in the agreement. In 2003, the Bay Program recognized that it could not effectively manage all 102 commitments outlined in *Chesapeake 2000* and adopted 10 keystone commitments as a management strategy to focus the partners' efforts. To achieve these 10 keystone commitments, the Bay Program had developed numerous planning documents. However, we found that these planning documents were not always consistent with each other. For example, the program developed a strategy for restoring 25,000 acres of wetlands by 2010. Subsequently, each state within the bay watershed and the District of Columbia developed tributary strategies that described actions for restoring over 200,000 acres of wetlands—far exceeding the 25,000 acres that the Bay Program had developed strategies for restoring. While we recognize that partners should have the freedom to develop higher targets

[5]The Chesapeake Bay Watershed Blue Ribbon Finance Panel was established to identify funding sources sufficient to implement basinwide cleanup plans so that the bay and tidal tributaries would be restored sufficiently by 2010 to remove them from the list of impaired waters under the Clean Water Act. The panel was composed of 15 leaders from the private sector, government, and the environmental community.

than established by the Bay Program, we were concerned that having such varying targets could cause confusion, not only for the partners, but for other stakeholders about what actions are really needed to restore the bay, and such varying targets appeared to contradict the effort's guiding strategy of taking a cooperative approach to achieving the restoration goals.

We also found that the Bay Program partners had devoted a significant amount of their limited resources to developing strategies that were either not being used by the Bay Program or were believed to be unachievable within the 2010 time frame. For example, the program invested significant resources to develop a detailed toxics work plan for achieving the toxics commitments in *Chesapeake 2000*. Even though the Bay Program had not been able to implement this work plan because personnel and funding had been unavailable, program officials told us that the plan was being revised. It was therefore unclear to us why the program was investing additional resources to revise a plan for which the necessary implementation resources were not available, and which was also not one of the 10 keystone commitments. According to a Bay Program official, strategies are often developed without knowing what level of resources will be available to implement them. While the program knows how much each partner has agreed to provide for the upcoming year, the amount of funding that partners will provide in the future is not always known. Without knowing what funding will be available, the Bay Program has been limited in its ability to target and direct funding toward those restoration activities that will be the most cost effective and beneficial.

As a result of these findings in 2005, we recommended that the Bay Program (1) develop a comprehensive, coordinated implementation strategy and (2) better target limited resources to the most effective and realistic work plans. In response to our recommendation to develop a comprehensive and coordinated implementation strategy, the Bay Program has developed a strategic framework to unify existing planning documents and articulate how the partnership will pursue its goals. According to the Bay Program, this framework is intended to provide the partners with a common understanding of the partnership's agenda of work, a single framework for all bay protection and restoration work, and, through the development of realistic annual targets, a uniform set of measures to evaluate the partners' progress in improving the bay. However, while this framework provides broad strategies for meeting the Bay Program's goals, it does not identify the activities that will be implemented to meet the goals, resources needed to implement the activities, or the partner(s) who will be responsible for funding and

implementing the activities. Therefore, we continue to believe that additional work is needed before the strategy that the Bay Program has developed can be considered a comprehensive, coordinated implementation strategy that can move the restoration effort forward in a more strategic and well-coordinated manner.

In response to our recommendation that the program target resources to the most cost-effective strategies, according to the Bay Program, in addition to the strategic framework described above, it has developed

- annual targets that it believes are more realistic and likely to be achieved;
- an activity integration plan system to identify and catalogue partners' current and planned implementation activities and corresponding resources; and
- program progress dashboards, which provide high-level summaries of key information, such as status of progress, summaries of actions and funding, and a brief summary of the challenges and actions needed to expedite progress.

According to the Bay Program, it has also adopted an adaptive management process, which will allow it to modify the restoration strategy in response to testing, monitoring, and evaluating applied strategies and incorporating new knowledge, and thereby, better inform partners' actions, emphasis, and future priorities. Bay Program officials told us that these actions have started to have the intended effects of promoting enhanced coordination among the partners, encouraging partners to review and improve their progress in protecting and restoring the bay, increasing the transparency of the Bay Program's operations, and improving the accountability of the Bay Program and its partners for meeting the bay health and restoration goals. We believe these actions are positive steps toward responding to our recommendation and improving the management and coordination of the Bay Program.

In addition, the Bay Program partners have established a funding priority framework that lists priorities for agriculture, wastewater treatment, and land management activities. While these priorities can be used to help achieve some of the annual targets established by the program, other annual targets—such as those for underwater bay grasses and oysters—do not have priorities associated with them. We believe that a clear set of priorities linked to the annual targets can help the partners focus the limited

resources available to those activities that provide the greatest benefit to the health of the bay.

In closing, Madam Chairwoman, it is well recognized that restoring the Chesapeake Bay is a massive, difficult, and complex undertaking. Our October 2005 report documented how the success of the program had been undermined by the lack of (1) an integrated approach to measure overall progress; (2) independent and credible reporting mechanisms; and (3) coordinated implementation strategies. These deficiencies had resulted in a situation in which the Bay Program could not present a clear and accurate picture of what the restoration effort had achieved, could not effectively articulate what strategies would best further the broad restoration goals, and could not identify how to set priorities for using limited resources. Since our report was issued, the Bay Program, with encouragement from Congress, has taken our recommendations seriously and has taken steps to implement them. The Bay Program has made important progress, and we believe that these initial steps will enable better management of the restoration effort. However, additional actions are still needed to ensure that the restoration effort is moving forward in the most cost-effective manner.

Madam Chairwoman, this concludes my prepared statement. I would be happy to respond to any questions that you or Members of the Subcommittee may have.

## Contacts and Acknowledgments

Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. For further information about this testimony, please contact Anu Mittal at (202) 512-3841 or mittala@gao.gov. Other individuals making significant contributions to this testimony were Sherry McDonald, Assistant Director, and Barbara Patterson.

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