



G A O

Accountability * Integrity * Reliability

United States Government Accountability Office
Washington, DC 20548

August 28, 2008

The Honorable Barbara A. Mikulski
United States Senate

Subject: *Recent Actions by the Chesapeake Bay Program Are Positive Steps Toward More Effectively Guiding the Restoration Effort, but Additional Steps Are Needed*

Dear Senator Mikulski:

Since 1983, the states of Maryland, Pennsylvania, and Virginia; the District of Columbia; the Chesapeake Bay Commission;¹ and the Environmental Protection Agency (EPA) have partnered to protect and restore the deteriorated Chesapeake Bay ecosystem. The partners established the Chesapeake Bay Program (Bay Program) to manage and coordinate a variety of restoration activities and in their most recent agreement, *Chesapeake 2000*, which was signed in June 2000, they established 102 commitments for the Chesapeake Bay, which were organized under five broad restoration goals to be achieved by 2010.

In October 2005, we issued a report entitled *Chesapeake Bay Program: Improved Strategies Are Needed to Better Assess, Report, and Manage Restoration Progress* ([GAO-06-96](#)), in which we reviewed the management, coordination, and reporting mechanisms used by the Bay Program.² Our review found that the Bay Program had

- developed more than 100 measures of restoration but lacked an integrated approach for measuring the progress being made in restoring the bay,
- reported on individual species and pollutants but lacked independent and credible mechanisms to report on overall bay health, and
- developed numerous plans for accomplishing its restoration commitments but lacked a comprehensive strategy that could provide a roadmap for accomplishing the goals outlined in *Chesapeake 2000*, and
- used its limited resources to develop plans that could not be implemented within available funding levels and was limited in its ability to target and direct funding to those restoration activities that will be the most cost effective and beneficial.

¹The Chesapeake Bay Commission is a tri-state legislative assembly representing Maryland, Pennsylvania, and Virginia.

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

To address these concerns, we recommended that the Bay Program take the following six actions:

- develop and implement an integrated approach for measuring overall restoration progress,
- revise its reporting approach to include an assessment of key ecological attributes that reflect the bay's health,
- report separately on the health of the bay and the progress made in implementing management actions,
- establish an independent and objective reporting process,
- develop a coordinated implementation strategy that unifies its various planning documents, and
- establish a means to better target its limited resources to the most cost-effective restoration activities.

In December 2007, the Congress enacted the Consolidated Appropriations Act of 2008 (Pub. L. No. 110-161). An accompanying explanatory statement of the House Committee on Appropriations directed EPA to (1) immediately implement all of the recommendations in our report and (2) submit a report to the Congress demonstrating that our recommendations have been implemented. Following the submission of EPA's July 2008 report to the Congress entitled *Strengthening the Management, Coordination, and Accountability of the Chesapeake Bay Program*, you asked us to provide an assessment of the steps taken by the Bay Program to address our 2005 recommendations.

To assess the progress that the Bay Program has made in implementing our recommendations, we reviewed Bay Program documents, such as its 2007 health and restoration assessment and the July 2008 report to the Congress. We also looked at partners' activities and funding data in the new Bay Program database, reviewed the Bay Program's Scientific and Technical Advisory Committee bylaws and operational guidance, 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.

On August 5, 2008, we provided a briefing to your staff on our assessment of the Bay Program's actions. This letter summarizes the information presented in that briefing and officially transmits the slides used during that briefing.³

³We also testified on our assessment of the steps taken by the Bay Program to address our recommendations on July 30, 2008. See GAO, *Chesapeake Bay Program: Recent Actions Are Positive Steps Toward More Effectively Guiding the Restoration Effort*, [GAO-08-1033T](#) (Washington, D.C.: July 30, 2008).

Summary

The Bay Program has made progress in addressing the six recommendations made in our October 2005 report. However, while actions taken by the Bay Program have fully addressed three of our six recommendations, additional actions are still needed to fully address the other three recommendations that we made. Specifically,

The Bay Program has developed an integrated approach to measure progress. A Bay Program task force identified 13 key indicators for measuring the health of the bay and categorized these indicators into three indices of bay health. In addition, the task force identified 20 key indicators for measuring the progress of restoration activities and categorized these into five indices that are linked to the goals outlined in *Chesapeake 2000*. According to the Bay Program, these indices are now being used to assess and report on the overall progress being made in restoring the bay's health and implementing restoration efforts. We believe that these new indices will help the program better evaluate its progress and allow it to provide a better overall assessment of the bay's health and the restoration progress.

The Bay Program has revised its reporting approach to include an assessment of key ecological attributes that reflect the bay's health. In response to our recommendation that the Bay Program's reports should include an ecological assessment of the health of the bay, the program is now reporting on 13 relevant ecological indicators. We believe that this new reporting approach is a more credible means of communicating information on the current health status of the bay.

The Bay Program has revised its reporting format to distinguish between the health of the bay and the results of management actions. The Bay Program has developed a reporting format that, unlike the previous format, distinguishes between ecosystem health and management actions. For example, its most recent report, entitled *Chesapeake Bay 2007 Health and Restoration Assessment*, is divided into four chapters: chapter 1 is an assessment of ecosystem health, chapter 2 describes factors impacting bay and watershed health, chapter 3 is an assessment of restoration efforts, and chapter 4 provides an assessment of local water quality assessments. The Bay Program is using actual monitoring data for the chapter that has an assessment of ecosystem health. We believe that the new report format is a more effective means of communicating separately on the health of the bay and the status of the restoration effort.

The Bay Program's actions fall short of establishing a fully independent and objective reporting process. The Bay Program has charged its Scientific and Technical Advisory Committee with assuring the scientific integrity of the data, indicators, and indices used in the program's publications. In addition, it has instituted a separate reporting process by the University of Maryland's Center for Environmental Science, which assesses the bay's health in report-card format. While the changes the Bay Program has made are an improvement over the

reporting process that was in place in 2005, we remain concerned about the lack of independence in the process for several reasons. First, while the Scientific and Technical Advisory Committee does not manage the day-to-day activities of the program, the committee is a standing committee of the Bay Program and provides input and guidance on developing measures to restore and protect the bay. We therefore believe that this committee cannot provide a fully independent review of Bay Program reports. Second, we do not believe that the report card issued by the University of Maryland's 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 center. We therefore continue to believe the Bay Program can take additional steps to establish a more independent peer review process that will further enhance the credibility and objectivity of its reports.

The Bay Program has taken steps to develop some of the key elements of a comprehensive, coordinated implementation strategy. In response to our recommendation to develop a comprehensive, 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 program, this framework is intended to provide the partners with a common understanding of the partnership's agenda of work. However, this framework provides only broad strategies for meeting the Bay Program's goals, and does not identify the activities that will be needed to reach the goals, resources needed to undertake the activities, or the partner(s) who will be responsible for funding and carrying out 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.

The Bay Program has taken initial steps needed to target limited resources to the most cost-effective strategies. According to the Bay Program, in addition to the strategic framework described above, it has, among other things,

- adopted an adaptive management process that will allow it to modify the restoration strategy in response to testing, monitoring, and new knowledge;
- developed annual targets that it believes are more realistic and likely to be achieved; and
- established a funding priority framework that lists priorities for agriculture, wastewater treatment, and land management activities.

While these are positive steps in the right direction, we do not believe that these steps by themselves will allow the Bay Program to target limited resources to the most cost effective strategies. Specifically, not all annual targets, such as those for underwater bay grasses and oysters, have priorities associated with them. Without a clear set of priorities linked to each of the annual targets, we believe that the partners will not be able to focus limited resources on those activities that provide

the greatest benefit to the health of the bay. In addition, while the program has established a process to identify what activities have been undertaken and what level of funding has been provided by each of the partners in any given year, it continues to lack information on what activities should have been undertaken and how much funding was needed. Without this benchmark information, the Bay Program partners will remain unable to identify gaps and duplication in their efforts, which will be key inputs necessary to effectively implementing an adaptive management approach.


Agency Comments

We obtained oral comments from EPA on our assessment of the actions taken by the Bay Program in response to our recommendations at a meeting with two EPA Associate Directors assigned to the program and other senior Bay Program officials. These officials concurred with our assessment of their actions and provided us with technical comments that we have incorporated as appropriate.

As agreed with your office, 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 Administrator of EPA, the Director of the Office of Management and Budget, and appropriate congressional committees. We will also provide copies to others upon request. In addition, the report will be available at no charge on GAO's Web site at <http://www.gao.gov>.

If you and your staff have any questions or need additional information, please contact me on (202) 512-3841 or mittala@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Major contributors to this report were Sherry McDonald, Assistant Director, and Barbara Patterson.

Sincerely yours,



Anu K. Mittal
Director
Natural Resources and Environment

Enclosure



**GAO's 2005 Report on the
Chesapeake Bay Program and the
Bay Program's Response to
Recommendations**



Recommendation: Establish an Integrated Approach to Measure Progress

In 2005, we reported that:

- The Bay Program had 101 measures for individual species or pollutants.
- These measures were appropriate for assessing progress made in achieving certain restoration commitments and to guide management decisions.
- However, the Bay Program had not developed an integrated approach to assess progress toward achieving the five broad restoration goals.

Recommendation: Develop and implement an integrated approach to assess overall restoration progress. In doing so, ensure that this approach clearly ties to the five broad restoration goals.

August 5, 2008

2



Bay Program's Response to GAO's Recommendation

- A Bay Program task force identified 13 key indicators for measuring bay health and integrated these indicators into 3 broad indices.
- In addition, the task force identified 20 key indicators for measuring the progress of restoration efforts and integrated these indicators into 5 broad indices.
- The indices are linked to the overall restoration goals, and according to the Bay Program, it is using these indices to assess and report on the overall progress made in restoring the bay's health and in implementing restoration efforts.
- We believe these new indices will allow the Bay program to better evaluate and report on progress it is making toward its goals.

August 5, 2008

3



Recommendation: Improve the Effectiveness and Credibility of the Bay Program's Reports

In 2005, we reported that Bay Program reports did not provide an effective and credible assessment of the bay's health. The reports:

- focused on the status of individual species or pollutants instead of providing information on a core set of ecosystem characteristics,
- tended to downplay the deteriorated condition of the bay, and
- lacked an independent report review process.

Recommendations:

- include an assessment of the key ecological attributes that reflect the bay's health,
- separately report on the health of the bay and management actions, and
- establish an independent review process.

August 5, 2008

4



Bay Program's Response to GAO's Recommendations

- The Bay Program has revised its annual reporting process to use a set of 13 indicators to report on the key ecological attributes of the bay's health.
- The program's annual reports distinguish between indicators of the bay's health and management actions.
- We believe these changes will improve the clarity of the program's report.
- The program charged its Scientific and Technical Advisory Committee with reviewing the data in its annual reports, and instituted a separate reporting process by the University of Maryland Center for Environmental Science.
 - We do not believe the Bay Program has taken adequate steps to establish an independent review process.

August 5, 2008

5



Recommendation: Develop a Comprehensive, Coordinated Implementation Strategy and Realistic Work Plans

In 2005, we reported that:

- The Bay Program lacked a comprehensive, coordinated implementation strategy that would allow it to strategically target limited resources to the most effective restoration activities.
- Some of the Bay Program’s planning documents were not consistent with each other, and some were perceived to be unachievable by the restoration partners.

Recommendations:

- Develop an overall, coordinated implementation strategy that unifies the program’s various planning documents.
- Establish a means to better target limited resources to ensure that the most effective and realistic work plans are developed and implemented.

August 5, 2008

6



Bay Program's Response to GAO's Recommendations

- The Bay Program developed:
 - a strategic framework to unify its planning documents,
 - annual targets that it believes are more realistic,
 - an activity integration plan to identify and catalogue implementation activities and resources, and
 - dashboards that provide high-level summaries of key information, such as status of progress.
- In addition, the Bay Program has also adopted an adaptive management approach to modify its strategy as needed.
- We believe these are positive steps in the right direction, but additional steps, such as identifying resources, assigning accountability, and setting priorities linked to annual targets, are needed to focus on activities with the greatest environmental benefit.

August 5, 2008

7



How much funding was provided for the restoration effort for fiscal years 1995 through 2004?

- Eleven federal agencies; the states of Maryland, Pennsylvania, and Virginia; and the District of Columbia provided almost \$3.7 billion (constant 2004 dollars) in direct funding to restore the Bay.
- \$1.9 billion in additional funding was provided by 10 federal agencies, Pennsylvania, and the District of Columbia for activities that have an indirect impact on the Bay's restoration.
- We did not make recommendations about the need to aggregate information on the amount of funding contributed by the partners. However, the Bay Program has established a database to collect information on the amount and source of funding being used and planned for restoration activities.

August 5, 2008

8

(360994)

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.

GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's Web site (www.gao.gov). Each weekday, GAO posts newly released reports, testimony, and correspondence on its Web site. To have GAO e-mail you a list of newly posted products every afternoon, go to www.gao.gov and select "E-mail Updates."

Order by Mail or Phone

The first copy of each printed report is free. Additional copies are \$2 each. A check or money order should be made out to the Superintendent of Documents. GAO also accepts VISA and Mastercard. Orders for 100 or more copies mailed to a single address are discounted 25 percent. Orders should be sent to:

U.S. Government Accountability Office
441 G Street NW, Room LM
Washington, DC 20548

To order by Phone: Voice: (202) 512-6000
TDD: (202) 512-2537
Fax: (202) 512-6061

To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Web site: www.gao.gov/fraudnet/fraudnet.htm

E-mail: fraudnet@gao.gov

Automated answering system: (800) 424-5454 or (202) 512-7470

Congressional Relations

Ralph Dawn, Managing Director, dawnr@gao.gov, (202) 512-4400
U.S. Government Accountability Office, 441 G Street NW, Room 7125
Washington, DC 20548

Public Affairs

Chuck Young, Managing Director, youngc1@gao.gov, (202) 512-4800
U.S. Government Accountability Office, 441 G Street NW, Room 7149
Washington, DC 20548