

**REPORT OF THE
JOINT LEGISLATIVE AUDIT
AND REVIEW COMMISSION**

Implementation of The Chesapeake Bay Preservation Act

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



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Preface

House Joint Resolution 622 (HJR 622) of the 2001 General Assembly directed the Joint Legislative Audit and Review Commission (JLARC) to study the implementation of Virginia's Chesapeake Bay Preservation Act (Bay Act). The Bay Act was established in 1988 as a partnership between Virginia and 84 of the State's easternmost localities as a way to ensure appropriate local land use and development in environmentally sensitive areas. The resolution reflected legislative concerns about the effectiveness of local and State oversight and enforcement of the Bay Act, as well as the level of resources necessary to effectively administer the Act's requirements.

Several issues related to implementation and enforcement of the Bay Act are identified in the report. For example, local adoption of management programs as required by the Bay Act was delayed, by as much as six years in some cases, because of factors such as inadequate resources to amend local ordinances and map environmentally sensitive lands. Moreover, enforcement of certain Bay Act requirements has occurred inconsistently across the Tidewater localities, resulting in development in areas where land-disturbing activities are supposed to be prohibited, as well as the irregular application of other management program criteria.

Localities indicated that the Chesapeake Bay Local Assistance Department (CBLAD) provides appropriate and timely technical assistance. However, inadequate financial resources appear to hinder CBLAD's ability to provide greater assistance, to perform certain internal functions, and to ensure local program compliance. In addition, it does not appear that the Chesapeake Bay Local Assistance Board has prioritized the evaluation and enforcement of local program implementation, despite being required to do so by the *Code of Virginia*. As this report was being finalized, the Board was in the process of implementing a comprehensive program to address this deficiency; however, it was unclear what impact the Governor's mandatory budget reductions might have on this program.

In response to the Commission's June 2002 direction to consider the future status of CBLAD, four structural options are presented in the study concerning potential ways to organize the department's functions. These options range from maintaining the status quo to consolidating the agency into the Department of Conservation and Recreation (DCR). Currently, it appears that the State has committed to merging the agency's functions into those of DCR. Nonetheless, it is important to recognize that the deficiencies identified in the report, including resource issues and inadequate State oversight and enforcement of local programs, should be addressed regardless of where these responsibilities are located and that they will not necessarily be corrected as a result of a merger.

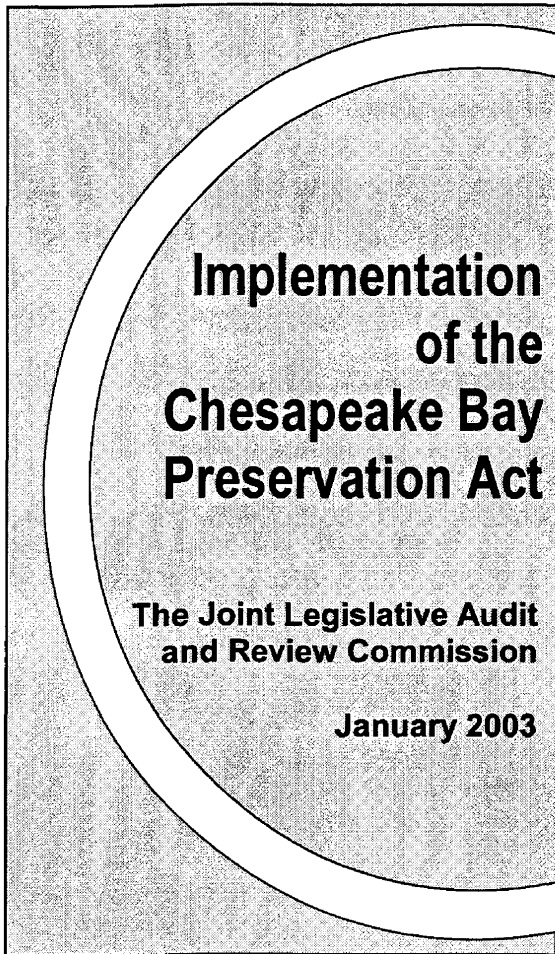
On behalf of the Commission staff, I wish to express our appreciation for the assistance and cooperation provided during this review by CBLAD staff, as well as planning staff in the Tidewater local governments.



Philip A. Leone
Director

January 28, 2003

JLARC Report Summary



The Chesapeake Bay is North America's largest estuary (an area where fresh and salt water mix), and it is the third largest estuary in the world. About half of the Bay's water comes from the Atlantic Ocean, while the other half drains from the streams and rivers of six states that are part of the Bay's watershed: Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia (the District of Columbia is also part of the watershed). By some estimates, approximately 60 percent of the land area in Virginia drains into the Chesapeake Bay.

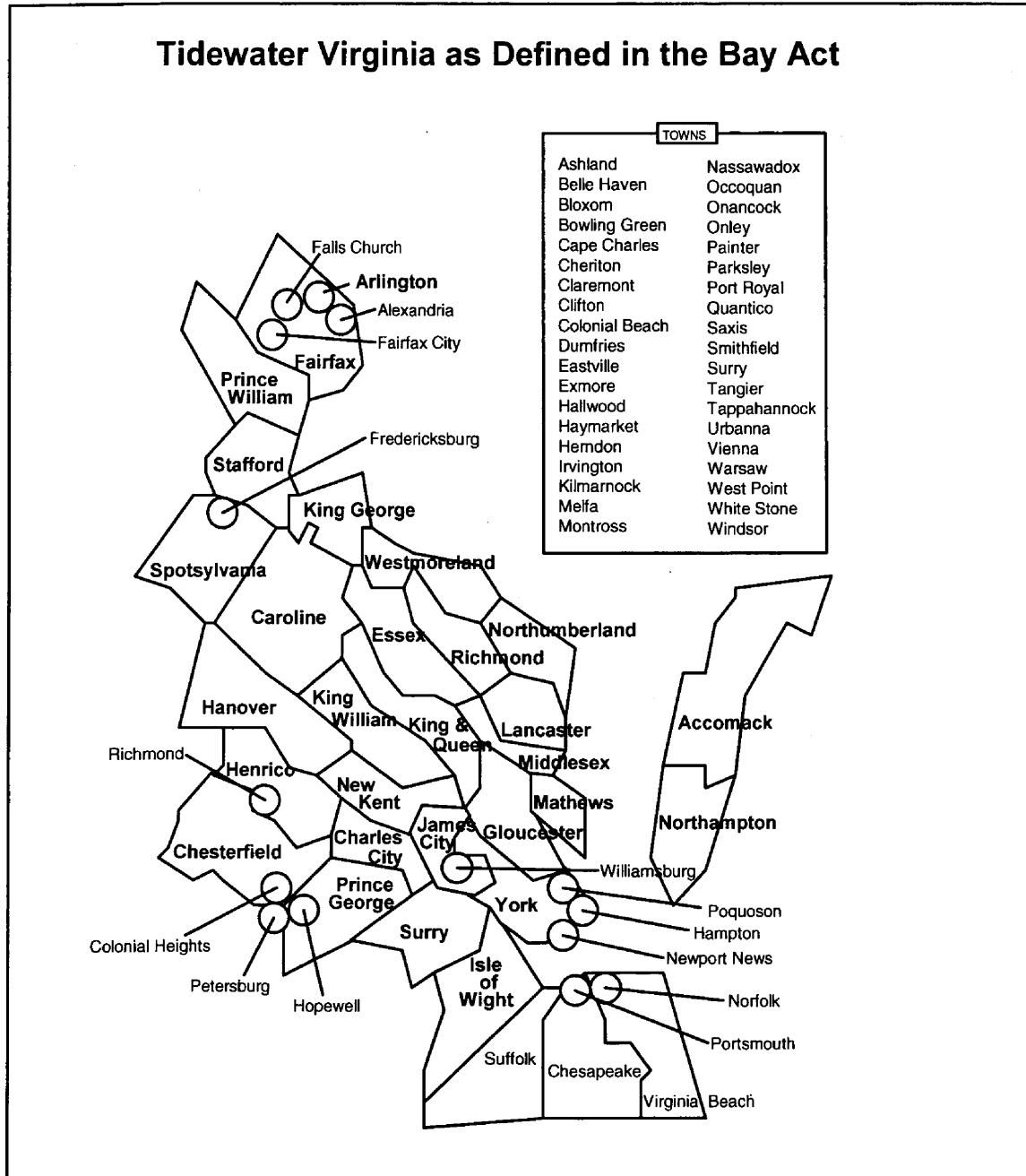
The General Assembly enacted the Chesapeake Bay Preservation Act (Bay Act) in 1988 as a partnership between the State and 84 of Virginia's

eastern-most localities that are located in the Chesapeake Bay watershed (see figure, next page). The primary focus of the Bay Act is to guide local land use decisions in a manner that promotes the water quality of the Bay and its tributaries while not unduly restricting the rights of landowners to develop their property. The *Code of Virginia* vests the localities with the primary responsibility to initiate and implement the Bay Act. The State is responsible for providing financial and technical assistance to the localities and ensuring that the provisions of the Bay Act are appropriately enforced.

The degradation of the Bay, it is believed, has occurred over a few centuries. Human activities from about the mid-1700s initiated a downward trend in the Bay's health. The 1983 Chesapeake Bay Agreement, the first in a series of multi-State agreements to improve the conditions of the Bay, and Virginia's 1988 Bay Act came into existence after the extent of the environmental degradation of the Chesapeake Bay became more fully understood during the 1970s and the 1980s. By that time, summer-time dissolved oxygen levels in the Bay (necessary for the survival of most aquatic plants and animals) were found to be severely depleted. Submerged aquatic vegetation (an indicator of the Bay's health), which had once covered shallow parts of the Bay, had almost disappeared. Both of these trends, it was concluded, stemmed in large part from increased loadings of nutrients due to land uses in the Bay watershed. For numerous reasons that included the impact of pollutant loads on water quality, seafood catches from the Bay also dramatically decreased over the decades. These findings led to public policy commitments to undo these trends and restore the health of the Bay.

Virginia's Bay Act has served as a vehicle for addressing State water quali-

Tidewater Virginia as Defined in the Bay Act



ty goals and the State's commitments under various Chesapeake Bay Agreements with the federal government and other states to clean up the Bay. Through the Bay Act and the Bay Agreements, the State has set forth a policy indicating that the Bay is worth saving. It has also set forth the policy that the State and localities are to be cooperative partners in Virginia's efforts to establish a Bay Act program and help restore the water quality of the Bay.

As the degradation of the Bay occurred over centuries, and given continuing population growth in the watershed, it is widely recognized that a long-term effort will be necessary to bring substantial and lasting improvement to the water quality of the Bay. Virginia's Bay Act program in the Tidewater region is a small but potentially important piece of the multi-State effort to restore the Bay, and it also is potentially important from the standpoint of improving local

water quality. Even at this relatively early stage in the existence of this program, it appears useful to assess the progress that has been made to date in implementing and enforcing the program.

House Joint Resolution 622, approved by the 2001 General Assembly, directs the Joint Legislative Audit and Review Commission (JLARC) to conduct such an assessment. The mandate requires that JLARC assess the Chesapeake Bay Local Assistance Board's (CBLAB) oversight and enforcement practices concerning local compliance with the Act. (The Board is assisted in performing its responsibilities by the staff of the Chesapeake Bay Local Assistance Department, or CBLAD.) The mandate also requires an evaluation of the implementation and enforcement of the local Bay Act programs, focusing especially on the frequency and rationale of permitted encroachments into the vegetated buffer area.

Finally, an assessment of the current resources necessary at the State and local level for implementation and enforcement of the Bay Act is also required. As part of the process for determining the scope of JLARC's review of State spending issues, JLARC members indicated at a July 8, 2002, meeting of the Commission that the issue of CBLAD's potential merger into the Department of Conservation and Recreation (DCR) should also be considered as part of the review.

The JLARC staff assessment of the implementation and enforcement of the Bay Act to date has resulted in six major findings that may be useful to policy-makers in considering the State's future approach to its supportive role under the Act. These findings include the following:

- The process by which localities have achieved consistency with Bay Act requirements has been slow, but gradual progress has been made. In part, slow progress has been due to the complexity of

achieving the required tasks, which included mapping environmentally sensitive areas, adopting the performance criteria required by the Bay Act into local ordinances, and adopting water quality protections into local comprehensive plans as required by the *Code of Virginia*.

- The enforcement record of localities under the Act is mixed. Key problem areas identified in this review included localities permitting development in environmentally sensitive areas, and not adhering to the regulations concerning: (1) the pumping out of septic systems, and (2) the use of Best Management Practices (BMP) agreements when addressing permitted encroachments into sensitive lands.
- The majority of local governments responding to a JLARC staff survey indicated that CBLAD provides appropriate technical assistance concerning their programs. However, CBLAD staff may not be able to continue providing this level of assistance as a result of current and potential budget constraints.
- State oversight and enforcement of the provisions of the Bay Act and the regulations have been weak, and recent efforts by CBLAB and CBLAD to focus more on these issues could be jeopardized by budget cutbacks.
- Four options for consideration are discussed in the report regarding CBLAD's placement and responsibilities. These include consideration of CBLAD's future status as an agency and a potential merger with DCR. It appears that some small cost economies and increased levels of coordination on some technical issues may occur as a result of such a consolidation. However, there are also concerns

about the impact of such a change on the short-term performance of, and long-term priority given to, the Board and the agency. In view of these concerns and the commitments the State has made to protect the water quality of the Chesapeake Bay, it may be more appropriate to allow CBLAD to continue performing its core functions as a separate entity.

- State and local policy-makers will likely need to decide whether to expand the geographic coverage of the Bay Act in the absence of fully conclusive benefit and cost data. In light of the State's budget difficulties, a prudent course may be to pursue limited expansion activity, by achieving consistency in participation among planning district commissions with localities already under the Act, or by working with localities interested in pursuing land use planning without the compulsion of a State mandate.

In sum, local programs that are considered fully consistent (at least on paper) with the Bay Act have only been established during the past decade in Tidewater. The difficult work of enforcing the requirements, ensuring the maintenance of effective water quality protection measures, and measuring long-term results still remains, as does the question of whether the geographic coverage of the Act should be extended. A higher State priority to enforcement of the Bay Act, which CBLAB and CBLAD will implement through a new compliance review process contained in the board regulations, should be helpful in maximizing the impact of the program. A merger of the agency into a larger agency at this time may hamper the achievement of this objective in the short-term and reduce the visibility and priority given to the Bay Act in the long term.

Implementation of Local Bay Act Programs Was Slow

The *Code of Virginia* places the primary responsibility for implementing and enforcing the provisions of the Bay Act on the 84 Tidewater local governments. The Tidewater localities meet this responsibility by developing and implementing their own local programs. A key component of the Bay Act requires localities to designate and protect Chesapeake Bay Preservation Areas (CBPAs) using performance criteria established by CBLAB. In addition, the *Code of Virginia* authorizes local governments to use their police and zoning powers, including civil penalties, to enforce violations of their local programs. The *Code* also allows localities outside the Tidewater region to incorporate elements of the Bay Act program into their comprehensive plans and land use ordinances. However, according to CBLAD staff, Albemarle County is the only non-Tidewater locality to adopt elements of the Bay Act program.

To facilitate local implementation of the Bay Act, CBLAB established a "three-phase implementation process" that localities follow to develop Bay Act programs. In Phase I, localities designate CBPAs and adopt CBLAB performance criteria to protect these areas. In Phase II, localities incorporate water quality protection measures into their comprehensive plans, and in Phase III, localities achieve initial completion of their Bay Act programs by revising all land use ordinances to make certain they are consistent with the Bay Act and board regulations.

Despite adoption of a *Code* requirement to complete Phase I within 12 months of adoption of the initial regulations (which became effective in 1991), it was not until 1997 that all 84 localities had designated Chesapeake Bay Preservation Areas and adopted ordinances to implement the program requirements. Upon review by CBLAB, some of these local programs were found to be provi-

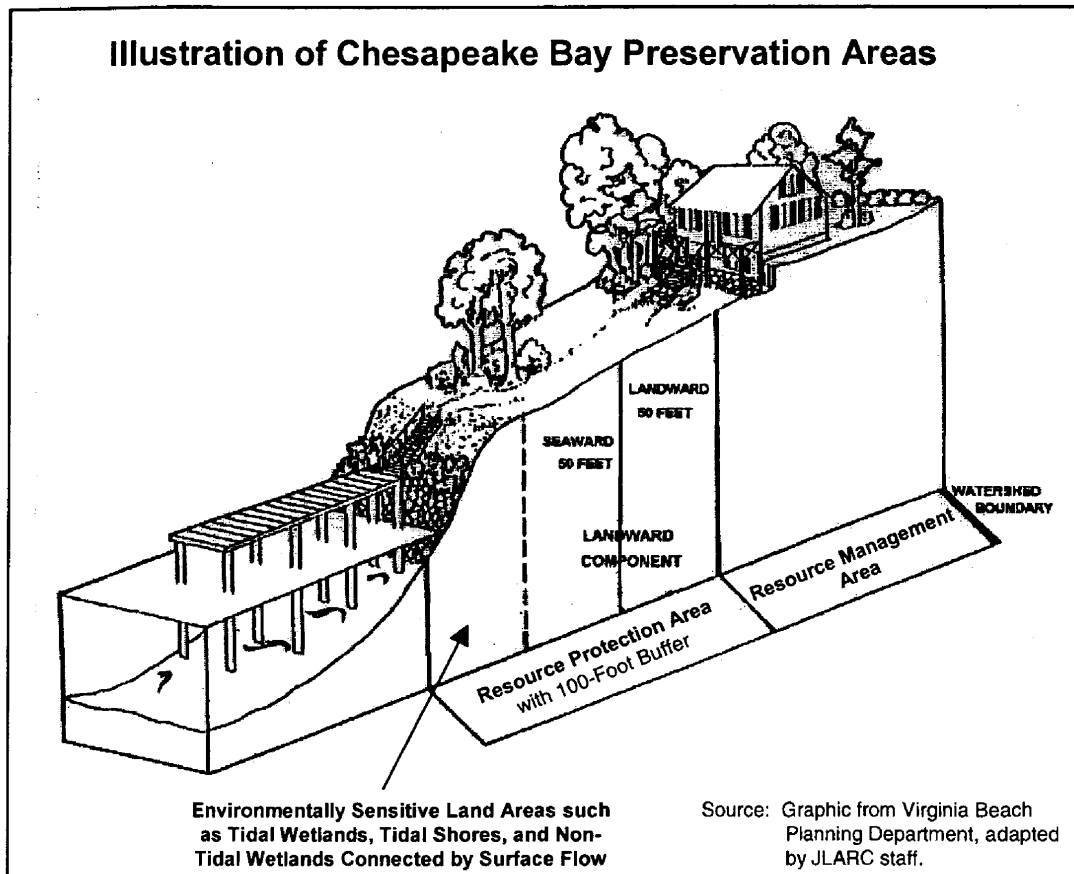
sionally consistent, with some local program language or elements needing further improvement to achieve full consistency. While implementing the ordinances they had adopted, these localities worked with CBLAD staff to accomplish the needed program changes. The last of these localities finally achieved full consistency with Phase I requirements in 2002, according to CBLAD staff.

While virtually all localities have now achieved initial consistency with Phase II requirements, six years passed between when the first locality achieved Phase II consistency and the time that most localities achieved this consistency (in 2001). CBLAB postponed requiring localities to begin the final implementation phase because it adopted revised regulations in December 2001, giving localities until March 2003 to amend their programs to comply with the new requirements. Factors that contributed to the slow progress on Phases I and II are numerous, but appear to include:

the complexity of the task, inadequate resources, limited locality commitment, a limited State priority for CBLAD's activities, and differences in the sophistication of the local comprehensive plans and ordinances. Furthermore, concerns related to the issue of private property rights are frequently encountered by localities when administering the Bay Act provisions.

Local Enforcement of the Bay Act Appears Mixed

One key element of the CBPA's is the Resource Protection Area (RPA). RPAs consist of environmentally sensitive lands along shorelines or perennial streams that serve as "filters" by removing pollutants from runoff before they enter the Bay and its tributaries (see figure below). CBLAB regulations strictly limit development activities from encroaching into the RPAs due to the important function these areas perform in reducing nonpoint source pollution.



JLARC staff conducted a file review at 11 selected Tidewater localities to assess the extent of encroachment activity. It was not feasible as part of this file review to systematically review records and collect data pertaining to denied applications as the localities, for the most part, did not maintain this information. However, a JLARC staff review of the files maintained by these localities for FY 2000 and FY 2001 indicated that these localities approved a substantial amount of encroachments into the RPA during those years (see table below). Furthermore, 30 percent of the files reviewed allowed encroachments for non-exempt applications into the seaward 50-feet of the vegetated buffer.

Localities also enforce their Bay Act programs through application of the CBLAB performance criteria. Results of the JLARC staff survey of the Tidewater localities suggest that local application of two of these performance criteria is not consistent across the localities. Responses by Tidewater localities indicate

that enforcement of the requirements for septic tank pump-out and the use of best management practices agreements when addressing permitted encroachments has been irregular.

Recommendation. *The Tidewater localities should seek to preclude land-disturbing activities in the Resource Protection Areas when possible. In cases where RPA encroachments are appropriate, CBLAD should ensure that Tidewater localities are appropriately applying the regulations to development activity that is permitted in the 100-foot Resource Protection Area buffer. The Tidewater localities should ensure that maintenance agreements are required whenever Best Management Practices (BMP) are used to mitigate land disturbances resulting from RPA encroachments. Local governments should also periodically inspect these BMPs to ensure that property owners maintain them. In addition, Tidewater local governments, CBLAD, and the Virginia Department of Health should work to ensure that residential septic systems are*

Local RPA Encroachment Activity During FY 2000 and FY 2001				
Locality	Total RPA Encroachment Applications Reviewed	Total Encroachment Applications Approved	Seaward 50 Feet of the RPA Approvals Only	
			Non-Exempt Applications Approved	Non-Exempt Applications Approved, as Percent of Total Applications
Alexandria	6	6	4	67 %
Virginia Beach	55	50	37	67 %
Chesapeake	75	75	35	47 %
Gloucester	34	31	7	21 %
Richmond City	12	12	2	17 %
James City	43	43	7	16 %
Henrico	14	14	1	7 %
Lancaster	50	50	2	4 %
Fairfax	24	23	1	4 %
Prince George	4	4	0	0 %
Spotsylvania	6	6	0	0 %
Total	323	314	96	30 %

identified and periodically maintained in accordance with board regulations.

CBLAD's Provision of Technical Assistance Has Been Appropriate, But Overall the Program Has Lacked Resources and Direction

The *Code of Virginia* requires CBLAB and the department to provide financial and technical assistance to the localities, planning district commissions (PDCs), and other governmental entities in the Tidewater designation as they implement the provisions of the Bay Act and regulations. A substantial majority of respondents to the JLARC staff survey of Tidewater localities indicated that CBLAD staff provides appropriate and timely assistance. However, local staff also indicated that CBLAD needs to continue to present Tidewater-wide educational and training opportunities.

Localities indicate that their programs lacked the resources necessary to better address the Bay Act's provisions. More than half of the 49 respondents to the JLARC survey question about staffing adequacy indicated that their programs had too few staff to perform the primary functions required by the Bay Act. Several localities also reported that CBLAB's revised regulations create new requirements that will likely stress their current resources. These include staffing and funding public hearing requirements and on-site delineation of the Resource Protection Areas. Furthermore, a new local implementation review program being developed by CBLAD will require localities to maintain and report information regarding their programs in ways that they were not previously required to do.

Likewise, CBLAD staff also indicated that inadequate resources have made it difficult for them to ensure that the provisions of the Bay Act and regulations are being appropriately implemented and enforced. Within the natural resources functional area, the agency has not received much priority over the years, and it has not received consistent direction in furtherance of its

goals. The agency reports that it has used cost savings from such factors as position vacancies and turnover to fund a historical gap in its non-grant funding level for non-personnel costs. This means that the department is in a poor position to meet budget cuts by not filling vacancies that occur as a result of routine turnover. Further, the department has been meeting its information technology assistance needs by using one of its engineering positions, diverting a substantial amount of time away from the position's assigned engineering responsibilities.

The future viability of certain agency functions may be greatly impacted by these identified funding issues. For example, the agency's Polecat Creek water quality monitoring project, located in Caroline County, may be eliminated as a result of recent budget cuts, according to the agency's acting director. Also, the 2002 General Assembly's substantial funding reduction in the amount CBLAD makes available for local governments, PDCs, and Soil and Water Conservation Districts may make it even more difficult to get locality compliance with the Bay Act and regulations. Finally, language in the *Code of Virginia* may need clarification to better identify State and local responsibilities regarding the provision of financial resources for this program.

Recommendations. *The department should seek to fill its vacant locality liaison position. CBLAD should also prepare a progress report on the Polecat Creek water quality monitoring project outlining its past costs and estimated future costs, analytic results, and advantages and disadvantages of continuing the project. In addition, as the State's fiscal position improves, CBLAD should make budget requests to restore funding for its financial assistance to localities program, in light of the potential cost impact to local governments as they begin their participation in the Local Program Compliance Review process.*

Oversight of Local Programs Should Be Strengthened

Despite being required by the *Code of Virginia* to evaluate and enforce the implementation of the local programs, it does not appear that the board has properly prioritized this responsibility. Prior to 1997, the department had no formal review process for assessing how well a local program addressed the intent of the Bay Act and the regulations. Beginning in that year, the board adopted a complaint-driven procedure that placed too much responsibility outside the agency to identify potential non-compliance at the local level. In fact, the department has identified this program as "essentially impossible to ensure effective local compliance" as a result of its reactive nature.

Several factors may have impacted the provision of oversight and enforcement by CBLAB and the department. Staff have indicated that the availability of resources required them to choose between performing consistency reviews or local program evaluations and, as a result, they prioritized consistency reviews. Board members and staff also told JLARC staff that the Bay Act is a partnership between the State and the local governments, and therefore, it is better to work with the localities rather than threaten them with legal action. They noted that delays in the board's attempts to promulgate regulations also reduced the board's desire to take legal action against non-compliant localities.

Since enactment of the Bay Act, the board has involved the State's Attorney General in two cases of locality non-compliance, both of which were settled prior to the court hearing date. In November 2001, the State's Attorney General issued an opinion clarifying the legal mechanisms available to the board for ensuring compliance among the localities. The opinion stated that CBLAB can (1) bring legal action to stop development based solely on a site plan, (2) file an injunction against a site developer when there is a violation of the Bay

Act or regulations, and (3) seek a court order prohibiting a locality from issuing permits for land disturbance activities until that locality is compliant with the Bay Act. Nonetheless, the board's willingness to use these powers is unclear.

CBLAD is currently in the process of trying to implement a Local Program Compliance Review process. The process would require localities to report on the implementation and enforcement of their Bay Act programs related to the performance criteria and other requirements. Initially, the program is scheduled to focus on site visits by CBLAD and locality staff to assess administration of the local program's provisions. CBLAD staff have stated that the first round of local program reviews is scheduled to take three to four years to complete.

Recommendations. *The Chesapeake Bay Local Assistance Board and Department should continue to pursue their new focus on compliance review. The Department should provide training to the Tidewater localities on the requirements of the new Local Program Compliance Review process. This training should include a description of the potential administrative and legal options available to the Chesapeake Bay Local Assistance Board in dealing with instances of local non-compliance.*

Potential Changes in the Structure of the Chesapeake Bay Local Assistance Department

Currently, consideration is being given to potential structural changes in the way the State administers the Bay Act. During the course of this JLARC review, discussions concerning the organization of CBLAD within the State's water quality control efforts have occurred. Through the Appropriations Act, the 2002 General Assembly required that the Secretary of Natural Resources develop a plan for consolidating CBLAD within the Department of Conservation and Recreation's Division of Soil and Water Conservation. In addition, the General Assembly also reduced the

CBLAD appropriation by one million dollars. At a July 2002 meeting, JLARC members reviewing State spending issues asked that JLARC staff review the issue of CBLAD's placement as part of the HJR 622 review.

CBLAD's mission and functions are an important concern in assessing the agency's placement. In a response to the JLARC report on the Natural Resources Secretariat in 1998, CBLAD provided comments that still appear to accurately reflect the agency's central mission and also address some key activities that are unique:

[CBLAD's] mission and staff workload is directed at assisting local governments in meeting the land management requirements of the Chesapeake Bay Preservation Act. These requirements include RPA buffer management, more sensitive site design, and incorporating water quality protection objectives into local comprehensive plans and zoning and subdivision ordinances.

CBLAD has a central role in fulfilling the State's responsibilities to the cooperative State-local partnership envisioned by the Bay Act. If the State wishes to maintain a proactive involvement with the Bay Act, then it appears that the functions performed by CBLAD will need to continue to exist, irrespective of where those functions are housed. There are some concerns that consolidation of CBLAD with another agency would bring limited benefits that may not justify this major structural change.

While some small cost economies and increased coordination of erosion and sediment activity may occur through consolidation, it does not appear that these benefits will be large. CBLAD is a small agency. Most of the staff have technical skills, the need for which is not anticipated to diminish in the foreseeable future under the responsibilities given to the State by the Bay Act and under the responsibilities given CBLAD

by Bay Act regulations. The technical assistance provided by CBLAD staff is generally rated well by localities. The potential for limited savings from efficiencies in administrative tasks could largely be realized without merging CBLAD with another agency. For example, if local assistance grants are anticipated to be minimal or non-existent over the next few years, then the agency's need for a grants program manager is questionable.

If a merger is pursued at this time, a concern is that CBLAD and CBLAB may lose momentum in the short term, and priority in the long term. For example, as indicated in this report, CBLAB and CBLAD recently revised the Bay regulations. These regulations provide for compliance review work, which appears overdue. If a merger is attempted, much time and effort may be diverted to accomplish the structural change.

There also is a related and longer-term concern -- that the State's commitment to address water quality protections through local land use planning and the use of mandatory requirements may be compromised. DCR has a much broader focus than water quality issues, including the management of State parks. Its water quality efforts have focused on voluntary measures, particularly outside of the area covered by the Bay Act. It is unclear what priority DCR would give to Bay Act land use planning functions over the long term. There is a concern that a reduction in the visibility and priority of the Bay Act functions may result from CBLAD's incorporation into a larger entity. Therefore, the State may wish to give serious consideration to allowing CBLAD to continue performing its core functions as a separate entity.

Regardless of structural considerations, two of CBLAD's core functions should be ensured: (1) providing assistance to local governments with land use planning needs, and (2) enforcement of Bay Act regulations. There also will be a continued need to shift more of the focus to rigorous enforcement, in order to ensure that the desired water

quality protection measures are actually undertaken.

The State May Wish to Pursue a Limited Approach to Expanding Geographic Coverage Under the Act

CBLAD was required by HJR 622 to develop a report on the benefits and costs of a westward expansion of the geographic coverage of the Bay Act in Virginia (beyond the existing Tidewater coverage area). For this review, JLARC staff assessed CBLAD's report.

CBLAD's report appears to represent a legitimate effort directed toward fulfilling a difficult task. However, the report also has some limitations. It does not succeed in overcoming a fundamental obstacle to meeting the study request. This obstacle is a lack of adequate information upon which to draw definitive conclusions about the benefits and costs, and the effects upon local governments that are entailed in a westward expansion.

The report uses an analysis prepared by the Department of Planning and Budget (DPB) to indicate that estimating the costs resulting from an expansion of the Bay Act would be almost impossible. The underlying assumption of the report, that fully and accurately quantifying the costs of an expansion is not feasible at this time, appears to be correct. However, the report could have gone further in providing estimates of the typical costs associated with some of the land use or best management practices that likely would be required, and estimates of the reductions in sediments, nitrogen, and phosphorus that might be achieved. This type of information has been estimated by State agencies in the past in conducting tributary strategy planning work.

The report also makes several references to the proven effectiveness of the Bay Act program in Tidewater in preventing nonpoint source pollution from entering the Bay and its tributaries. The report states that a perspective on the effectiveness, efficiency, and appropriateness of the Bay Act program can

be gained from considering recent data which shows few impaired stream miles in Tidewater (where the Act operates) compared to the proposed expansion area. However, this argument is weak. The report does not demonstrate that the Bay Act is responsible for this difference, and it does not mention that hydrologic and land uses between Tidewater and some areas in the western part of the watershed are likely to account for a major part of the difference.

Still, CBLAD can point to numerous studies showing that certain practices which the Bay Act promotes, such as the use of buffer zones, can be effective in protecting water quality, and have some potential in the expansion area if applied appropriately. Based on the water quality studies that have been done, the CBLAD report could have gone further in identifying the various factors that appear to typically impact the relative successfulness of the types of protection activities used in the Bay program. This kind of information might help localities better gauge whether the factors that tend to promote success are or are not prevalent in their locality.

Ultimately, however, the western expansion of the program is a policy decision that must be decided in the absence of fully conclusive data. There are factors that cannot be fully known prior to implementation, including the extent to which the measures required by the Bay Act will be established as called for and effectively maintained over time.

JLARC staff identified four primary options available to the General Assembly as it considers whether to expand the geographic scope of the Chesapeake Bay Preservation Act. These include: (1) not expanding the Bay Act to include additional localities, (2) adopting CBLAD's proposed expansion scenario to make 104 additional local governments subject to the provisions of the Bay Act, (3) expanding the Bay Act to include the 13 localities in planning district commissions that are already subject to the Bay Act, or (4) allowing

CBLAD staff to work with local governments in the western watershed that are interested in developing land use planning activities similar to those of the Bay Act. Given that there is an absence of fully conclusive cost and benefit data, and given the State's current budget situation, it may be prudent to seek a limited expansion effort as envisioned

under options three and four. Some effort directed toward an expansion appears appropriate to fulfill the State's commitment to use sound land use management to achieve water quality improvement under the Bay Agreement and to help meet local aspirations to achieve local water quality goals.

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I. Introduction

The Chesapeake Bay is North America's largest estuary (an area where fresh and salt water mix), and it is the third largest estuary in the world. About half of the Bay's water volume comes from the Atlantic Ocean, while the other half drains from the streams and rivers of six states that are part of the Bay watershed: Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia (the District of Columbia is also part of the watershed). With regard to the estuary itself, the Bay is about 200 miles long, reaching from Havre de Grace in Maryland to Norfolk, Virginia, with about 5,600 miles of shoreline, and an average depth of 21 feet.

House Joint Resolution (HJR) 622, approved by the 2001 General Assembly, directs JLARC to study the implementation of Virginia's Chesapeake Bay Preservation Act (Bay Act). The Bay Act was enacted in 1988 to ensure appropriate local land use and development in environmentally sensitive areas in the State's eastern-most localities as a means of protecting water quality in the Chesapeake Bay.

HJR 622 directs JLARC staff to examine a number of issues related to the effectiveness of the Bay Act at the State and local levels (Appendix A). Specifically, the mandate requires JLARC staff to review the methods and effectiveness of the practices used by the Chesapeake Bay Local Assistance Board (CBLAB) for assessing local compliance and exercising its enforcement authority. In addition, JLARC staff are directed to evaluate local implementation and local enforcement of the Bay Act, including the use of exceptions, variances, and other exemptions from the Bay Act's requirements. The resolution also directs JLARC staff to assess the State and local resources necessary for implementation and enforcement of the Act. On July 8, 2002, members of JLARC also directed that the consolidation of CBLAD with DCR, an issue identified for possible research in the JLARC State spending study, be considered under the auspices of HJR 622.

In addition, HJR 622 required the Chesapeake Bay Local Assistance Department (CBLAD) to prepare an assessment of the potential environmental, funding, and regulatory effects of expanding the Bay Act to the localities in the Chesapeake Bay's western watershed. The resolution required CBLAD to submit this assessment to JLARC by October 20, 2001 in order for JLARC staff to prepare an interim report on the department's findings by November 30, 2001. However, CBLAD did not provide the report to JLARC staff until November 27, 2001, which left too little time for the preparation of an interim report before the 2002 Session. JLARC's staff evaluation of the CBLAD document is included in this report.

OVERVIEW OF VIRGINIA'S CHESAPEAKE BAY PROTECTION PROGRAMS

Article XI of the *Constitution of Virginia* states that it shall be the policy of the Commonwealth to "conserve, develop, and use its natural resources," and "pro-

tect its atmosphere, lands, and waters from pollution, impairment, or destruction, for the benefit, enjoyment, and general welfare of the people of the Commonwealth.” The Chesapeake Bay (Bay) is one of Virginia’s most important natural resources. As such, the State is actively involved in protecting and improving the quality of the Bay and its tributaries through a number of regional and State initiatives. Virginia is one of five signatories to the Chesapeake Bay Agreement (Bay Agreement), which establishes goals and objectives for improving the health of the Bay. Virginia’s effort to protect the Bay and the rivers and streams flowing into it involves several State agencies. The Chesapeake Bay Preservation Act is part of Virginia’s response to its obligations under the 1987 and 2000 Bay Agreements.

The Chesapeake Bay Agreement

In the early 1980s, the federal Environmental Protection Agency (EPA) completed a seven-year water quality analysis of the Chesapeake Bay’s overall health. The results indicated that the Bay’s waters were substantially degraded. As a response to these findings, Virginia, Maryland, Pennsylvania, Washington D.C, and the EPA signed the first Bay Agreement in 1983. Through the Bay Agreement, the five signatories pledged to work together to solve the Bay’s water quality problems.

Amendments adopted in 1987 included a commitment to reduce the levels of nitrogen and phosphorus entering the Bay by 40 percent. During that same year the General Assembly adopted a ban on the use of phosphate detergents. The 1992 Bay Agreement reaffirmed the 40 percent nutrient reduction goal and required that Virginia adopt specific tributary strategies that focus on achieving those goals. In 2000, the signatory states again amended the Bay Agreement to include additional land use protection and restoration goals. The Bay Agreement, as amended, states that the land use goal is to:

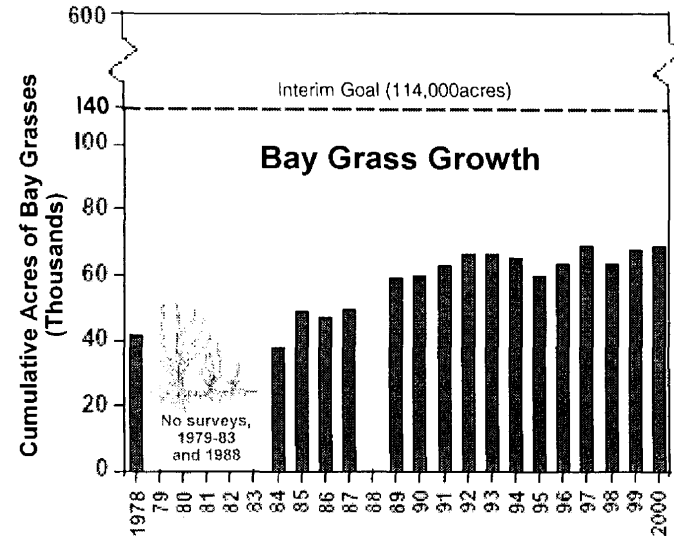
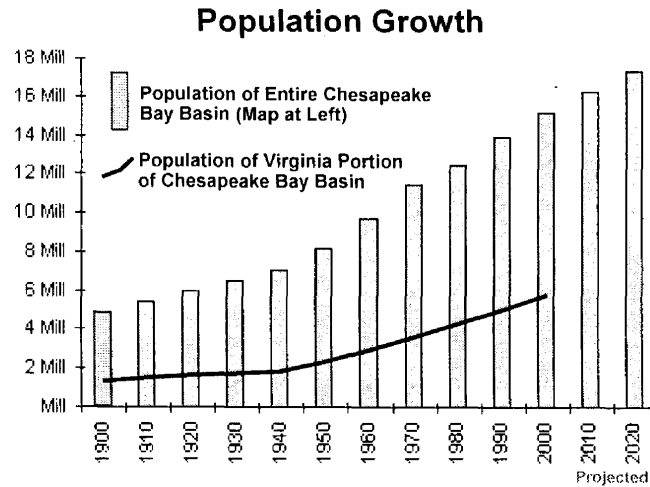
develop, promote and achieve sound land use practices, which protect and restore watershed resources and water quality, maintain reduced pollutant loadings for the Bay and its tributaries and restore and preserve aquatic living resources.

The 2000 Agreement commits, for example, to permanently preserve from development “20 percent of the land area in the watershed” and restore 2,010 miles of forested buffers along river and stream banks. Additionally, the signatory states agreed to reduce the rate of “harmful sprawl” development by 30 percent by 2010, and agreed to promote sound land use practices.

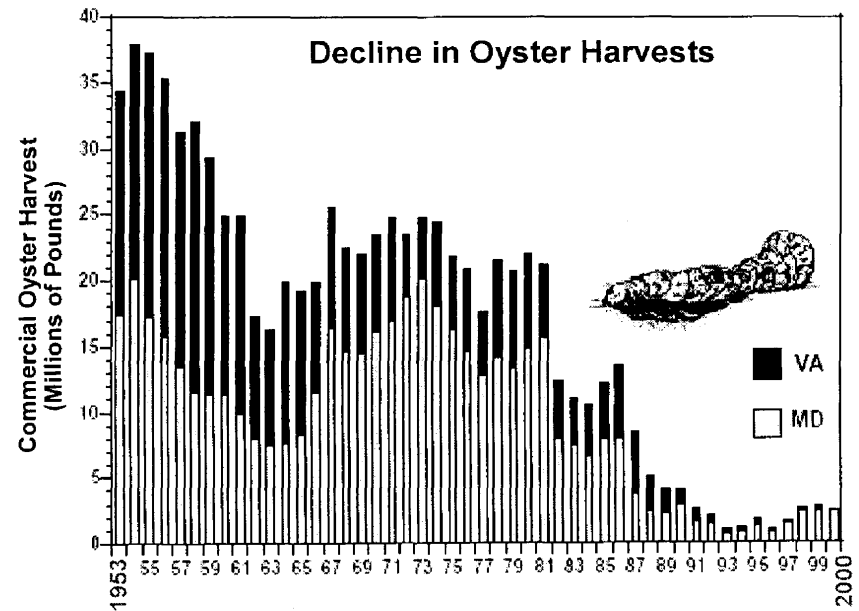
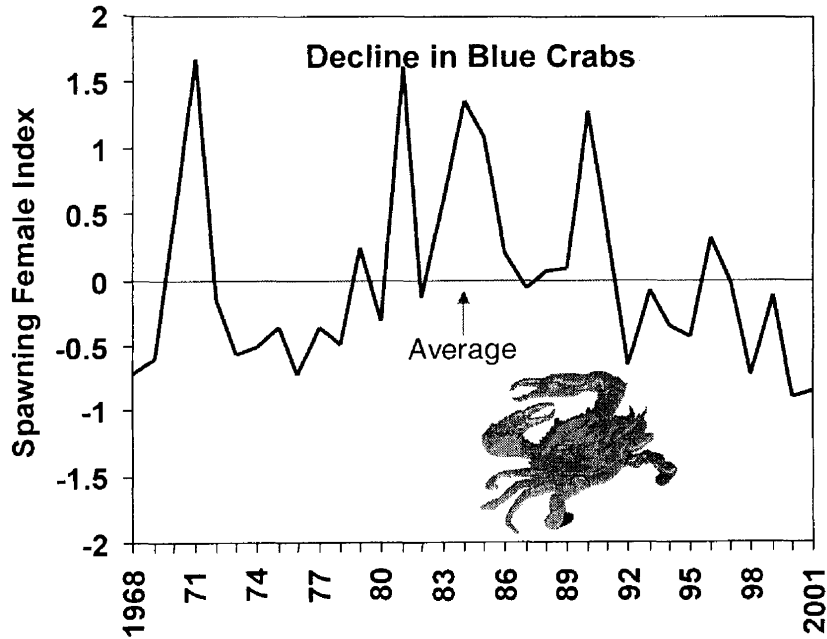
Figure 1 shows four trends that help capture some of the challenges efforts to restore the Bay face. The overall picture is one where offsetting the impacts of population growth has proven to be a challenging proposition for those seeking to improve the condition of the Bay.

The population of the Bay watershed has increased dramatically since the early 1900s, and more growth is projected between 2000 and 2020. With population

Figure 1
Chesapeake Bay Trends



Source: Chesapeake Bay Program
(www.chesapeakebay.net).



comes increasing flows of wastewater nutrients and increased runoff due to more paved surfaces and less vegetation. In the years following the first Bay Agreement in 1983, there has been some improvement in Bay grasses, which is an important indicator of Bay health. However, current levels are well below the goals that have been set under Chesapeake Bay Agreements.

Other frequently cited indicators of Bay health include the levels of crabs and oysters in the Bay. In general, blue crabs experienced some good years in the mid-1980s to early 1990s, but the trend during most of the 1990s was in a declining direction. Oyster harvesting has dramatically declined from the 1880s to the 1990s (the graphic shows the trends just from the early 1950s). Prior to the 1950s, the advent of mechanized harvesting of oysters led to great reductions in oyster reefs, and thereby reduced the capacity of oysters to filter the Bay. This helped make the Bay more vulnerable to the growth of algae. Since the 1950s, oysters declined further, in part due to disease. During the late 1990s, small increases were observed, but this occurred at a very low level compared to the past.

Virginia Administers Several Programs to Protect the Bay's Water Quality

In Virginia, 15 agencies share responsibility for achieving the commitments that comprise the broad goals of the Chesapeake Bay 2000 Agreement (Table 1). Broadly, these goals include: (1) living resources protection and restoration; (2) vital habitat protection and restoration; (3) water quality protection and restoration; (4) sound land use; and (5) stewardship and community engagement. While the majority of State entities responsible for some part of the Bay Agreement are located in the Natural Resources Secretariat, other agencies with responsibilities under the Bay Agreement such as the Virginia Department of Transportation (VDOT) and the Virginia Department of Health (VDH) are not. Specific responsibilities for the commitments in the Bay Agreement are spread across many State agencies. For example, CBLAD, DCR, DEQ, VDH, and VDOT are identified as the State agencies charged with developing and implementing strategies for meeting Virginia's commitment to continue reducing nutrient loading by 40 percent.

The State has appropriated funds for the purpose of protecting Bay water quality, and State officials have estimated that more funding will be needed in the future. According to the *2001 Annual Report on the Implementation of the Chesapeake Bay Agreement (Secretary's Report)* prepared by the Secretary of Natural Resources, for FY 2001 more than \$109 million was appropriated to DCR, DEQ, DOF, DGIF, VMRC, and CBLAD for these purposes. Of this amount, approximately 53 percent was from State General Funds. More than \$86 million was appropriated in FY 2002, with State General Funds accounting for more than 38 percent of that amount. Moreover, the 2001 *Secretary's Report* estimates that from FY 2003 to FY 2010, the agencies responsible for the Bay Agreement commitments will need between \$272 million and \$3.2 billion in State funds to carry out their functions pursuant to the commitments of the Bay Agreement.

Table 1					
State Agencies With Significant Responsibility for Meeting Objectives of the Chesapeake Bay 2000 Agreement					
Agency	Goals				
	Living Resources	Vital Habitat	Water Quality	Sound Land Use	Stewardship and Community Engagement
Natural Resource Agencies					
CBLAD		✓	✓	✓	✓
DCR	✓	✓	✓	✓	✓
DEQ	✓	✓	✓	✓	✓
DGIF	✓	✓	✓	✓	✓
DHR				✓	✓
DOF		✓	✓	✓	✓
VMNH					✓
VMRC	✓	✓		✓	✓
Other Agencies					
DGS		✓			✓
DHCD				✓	
DOE					✓
VDACS	✓	✓	✓	✓	
VDH			✓	✓	
VDOT	✓	✓	✓	✓	✓
<p>Note: DCR – Department of Conservation and Recreation, DEQ – Department of Environmental Quality, DGS – Department of General Services, DGIF – Department of Game and Inland Fisheries, DHCD – Department of Housing and Community Development, DHR – Department of Historic Resources, DOE – Department of Education, DOF – Department of Forestry, VDACS – Virginia Department of Agriculture and Consumer Services, VDH – Virginia Department of Health, VDOT – Virginia Department of Transportation, VMNH – Virginia Museum of Natural History, and VMRC – Virginia Marine Resources Commission.</p> <p>Source: JLARC staff analysis of Chesapeake Bay Agreements and the 2001 Annual Report on the Implementation of the Chesapeake Bay Agreement.</p>					

Bay Act Serves Role in Meeting State's Chesapeake Bay Agreement Commitments

The Bay Act is part of Virginia's response to the goals and commitments identified in the Chesapeake Bay Agreements concerning living resources, water quality, and land use planning. Specifically, the Bay Act helps address the State's commitment to the 40 percent nutrient reduction goal agreed to in the 1987 Bay Agreement. Several other requirements in the Bay Act were first identified as commitments in the 1987 Agreement, including: providing local governments with financial and technical assistance to continue and expand their land management efforts, limiting harmful sprawl through land use planning goals, evaluating the potential water quality impacts of State and federal projects, and encouraging the

protection of environmentally sensitive lands. Furthermore, the 2001 *Secretary's Report* identifies meeting the provisions of the Chesapeake Bay Preservation Act as an activity through which local governments contribute directly to implementation of the Bay Agreement. The requirements for a 100-foot vegetated buffer and regulation of silviculture activities in the Bay Act also address the State's commitment to restoring 610 miles of riparian forest buffer along waterways connected to the Chesapeake Bay.

NONPOINT SOURCE POLLUTANT LOADS AND WATER QUALITY TRENDS IN VIRGINIA'S WATERSHED

The *Code of Virginia* requires that the State document its efforts to achieve the commitments in the Bay Agreement. The 2000 data indicated that, since 1985, trends in the Bay's annual loadings of phosphorous, nitrogen, and sediment have decreased. In addition, the State also measures the Bay's water quality using concentrations of certain nonpoint source pollutants and also trends in the presence of fecal coliform bacteria. Although there has been some improvement in the concentrations of these pollutants, the evidence suggests that the overall effect is mixed.

Trends in Nonpoint Source Pollutant Loads in Virginia's Portion of the Chesapeake Bay Watershed

The Secretary of Natural Resources is required by §2.2-220.1 of the *Code of Virginia* to report on the State's progress toward meeting the commitments agreed to in the Chesapeake Bay Agreement. The report generally includes a section on water quality and specifically evaluates several contaminants, including phosphorous, nitrogen, and suspended solids, which are types of nonpoint source pollution the Bay Act is designed to limit. According to the *Secretary's Report*, a progress run of the Chesapeake Bay Watershed Model from 2000 indicates that annual loads from Virginia's tributary rivers due to nonpoint sources were reduced by approximately six percent for phosphorous, seven percent for nitrogen, and eleven percent for sediment, as compared to the 1985 baseline. These figures represent the percentage change in the total nonpoint source loads, and not just the portion of the loads that are considered "controllable" (stemming from human activity).

Trends in Pollutant and Other Concentrations Based on Water Quality Monitoring Data in the Watershed

The *Secretary's Report* summarizes the trends in water quality conditions in Virginia's portion of the Chesapeake Bay system by discussing six factors: phosphorous concentrations, nitrogen concentrations, chlorophyll levels in the water, dissolved oxygen levels, water clarity (as indicated by the ability of sunlight to penetrate the water), and suspended solids concentrations. In addition, DEQ water quality assessment reports show data on fecal coliform bacteria trends, an important indicator of water quality. The reports by the Secretary and DEQ noted some areas

of improvement, but the overall trend across the indicators appears to be mixed (Table 2).

Phosphorus Concentrations. Phosphorous is a principal nutrient that degrades water quality. Introduction of phosphorus into a lake or stream may result in excessive algal growth. Increasing algal matter depletes the supply of oxygen available to fish, decreases the physical area available to aquatic organisms, and limits the amount of sunlight available to submerged aquatic vegetation (SAV), all of which have serious consequences for the food chain. A phosphate detergent ban adopted by the Bay Agreement states beginning in the mid-1980s is a major factor in the achievement of reductions in phosphorus concentrations. The 2001 *Secretary's Report* also suggests that best management practices to control nonpoint source pollutants may have had an impact as well.

Nitrogen Concentrations. Nitrogen is a nutrient that has a water quality impact that is similar to phosphorous. The 2001 *Secretary's Report* states that nitrogen concentrations in the State's portion of the Bay and its tributaries have improved at "nearly every watershed input station since 1985." According to the report, an exception to the overall positive trend in the rivers is the Pamunkey.

Chlorophyll Levels in the Water. Chlorophyll *a* levels are a measure of the amount of algal matter in the water. As previously mentioned, high levels of chlorophyll *a*, or algal matter, may deplete the supply of oxygen available to fish and limit the amount of sunlight available to SAV. According to the 2001 *Secretary's Re-*

Table 2
Overview of Trends in Virginia Bay Watershed
Water Quality Indicators
(Based on the 2001 report of the Secretary of Natural Resources
and the DEQ 305 (b) Report from 2000)

Water Quality Indicator	Reports Indicate Widespread Trend Toward Improvement in Virginia Bay Watershed Waters Since 1985:	
	YES	NO
Phosphorus	✓	
Nitrogen	✓	
Chlorophyll		✓
Dissolved Oxygen	✓	
Water Clarity		✓
Suspended Solids		✓
Fecal Coliform		✓

Source: 2001 Annual Report on the Implementation of the Chesapeake Bay Agreement, and DEQ's Virginia Water Quality Assessment, 305(b) Report, August 2000.

port, of the rivers feeding into the Bay, only the western branch of the Elizabeth River shows improvements in the levels of chlorophyll *a* concentrations. Despite the reductions in nutrient levels, this lack of improvement indicates that more nutrient reductions are necessary before reductions in chlorophyll *a* levels will occur.

Dissolved Oxygen Levels. Dissolved oxygen is necessary for most aquatic plants and animals to survive. If levels of dissolved oxygen are too low, for example, fish will drown in the water. According to the 2001 *Secretary's Report*, the Potomac, Rappahannock, James, and Elizabeth rivers show improving conditions for levels of dissolved oxygen since 1985.

Water Clarity. Water clarity, as measured by the ability of sunlight to penetrate the water, is influenced by the levels of sediments, algae, decaying matter, and other dissolved particles in the water. Not only does poor water clarity indicate inadequate conditions for SAV, but it also affects the ability of fish to see their prey and avoid their predators. According to the 2001 *Secretary's Report*, water clarity is degrading in the Chesapeake Bay and in many segments of its lower tributaries. The report concludes that possible causes for this trend include high levels of river-flow and "increased shoreline erosion as a result of waterside development."

Suspended Solids. Suspended solids are a measure of the presence of small particulates in the water. As the combination of three water clarity measures, suspended solids are a key indicator of the conditions of SAV. Excessive suspended solids in the water indicate inadequate conditions for SAV and point toward disastrous conditions for oysters and other aquatic animals. Suspended solids can also contain concentrations of phosphorous and nitrogen, thus increasing the risk of these contaminants affecting water quality. According to the *Secretary's Report*, since 1985, suspended solids concentrations have had an increasingly negative impact on the water quality of the Bay mainstem and its tributaries. The report describes mixed results with regard to sediment trends:

Parts of all major tributaries (Potomac, Rappahannock, York, James, and Elizabeth) have segments that fail or are borderline in relation to targets to support growth of submerged aquatic vegetation. The improving trends in flow adjusted concentrations at the watershed input stations of the Potomac and Rappahannock are encouraging signs that management action to reduce [nonpoint source] sediment runoff may be having some success. However, there are several degrading trends in the tributaries and some of the Virginia Chesapeake Bay mainstem.

Fecal Coliform Bacteria Trends. The presence of fecal coliform bacteria is another water quality indicator used by the State, and has been described by DEQ as a leading cause of water impairedness. These measurements are used to reveal the potential presence of improperly treated sewage or nonpoint sources of human and animal waste. The presence of fecal coliform in water indicates that there is a potential for pathogen contamination and is primarily regulated to protect public health (for example, *e. coli* is a form of fecal coliform). DEQ indicates in its draft of the 2002 *Virginia Water Quality Assessment Report* that fecal coliform trends

throughout the State appear to be in a stable to improving condition. However, increasing trends of fecal coliform concentrations outnumbered decreasing trends in the major rivers (Potomac, James, Rappahannock, York) and Coastal Basins feeding the Bay. (The measurements of rivers include segments outside of the area designated as Tidewater Virginia.)

THE CHESAPEAKE BAY PRESERVATION ACT IS A COOPERATIVE STATE-LOCAL PROGRAM

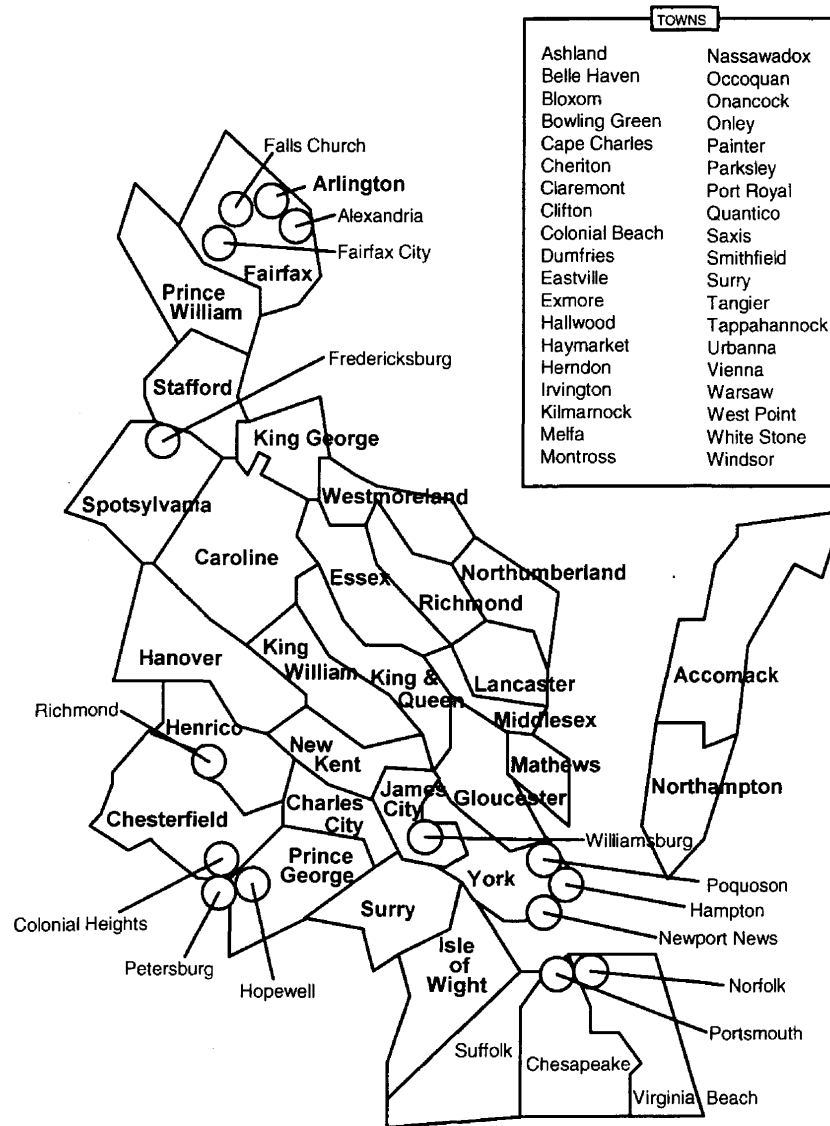
The 1988 General Assembly enacted the Chesapeake Bay Preservation Act (Bay Act) as a cooperative State-local partnership to help protect and improve the water quality of the Bay and its tributaries from non-point source pollution through a comprehensive approach to land use management. Key to the Bay Act is the assumption that land can be developed in ways that limit its negative impact on water quality while still allowing for State and local economic development to occur. The Bay Act requires localities to address nonpoint source pollution by implementing and enforcing programs that protect Chesapeake Bay Preservation Areas (CBPA), which are environmentally sensitive lands that, if improperly developed, could adversely impact the Bay's water quality.

Creation of the Chesapeake Bay Preservation Act

The 1986 Virginia General Assembly established a study group, known as the Chesapeake Bay Land Use Roundtable (Roundtable), to "find ways to address the relationship between land use issues and the health of the Bay." The Roundtable issued a final report in November 1987 containing several recommended findings to protect the Bay's water quality. For example, the Roundtable recommended that the State establish a statutory policy to protect the Chesapeake Bay, establish a requirement for mandatory zoning in Tidewater localities that is consistent with the goals established in their comprehensive plans, and provide localities with technical and financial support for environmental land use management programs.

The 1988 General Assembly used the Roundtable's recommendations as the basis for enacting the Bay Act. The Act requires 84 of the State's eastern-most counties, cities, and independent towns (defined by the Bay Act as "Tidewater") to protect the Bay and its tributaries through measures to reduce the adverse impacts of land use and development activities (Figure 2). The Bay Act also requires the State to provide the Tidewater local governments with the resources, oversight, and policy guidance necessary to develop local programs required under the Act.

Figure 2
Tidewater Virginia as Defined in the Bay Act



Source: *Code of Virginia*, Section 10.1-2101.

Local Governments Are Responsible for Implementation and Enforcement of the Intent of the Bay Act

Section 10.1-2100(B) of the *Code of Virginia* places the primary responsibility for “planning and implementing” the provisions of the Bay Act on the 84 Tidewater localities. Specifically, §10.1-2109 of the *Code* requires localities to designate and protect Chesapeake Bay Preservation Areas (CBPA) by incorporating water quality protection measures into their comprehensive plans and land use

ordinances. As part of the regulations developed to assist local governments with implementing the Bay Act's requirements, localities must adopt "local Bay Act programs" that consist of elements such as CBPA maps, zoning and subdivision ordinances incorporating CBLAB's general performance criteria for managing land use activities within CBPAs, and comprehensive plans addressing specific areas outlined in the regulations for protecting water quality. In addition, local governments must establish a "plan of development process" for reviewing proposed land disturbing activities within their CBPAs to ensure that these activities will occur in an environmentally responsible manner before issuing developers and property owners building permits.

Section 10.1-2109 of the *Code* also authorizes localities to levy civil penalties against individuals who violate "any provision of any local ordinance related to the protection of [CBPAs]." In addition, the *Code of Virginia* allows localities outside the Tidewater region to incorporate elements of the Bay Act into their comprehensive plans and land use ordinances.

State Duties and Responsibilities Prescribed by the Bay Act

Among the policy alternatives recommended in the Roundtable report was an identification of the need for the Commonwealth to play a greater role in managing the State's land use growth patterns as a means of protecting certain natural resources. As enacted by the 1988 General Assembly, §10.1-2100(B) of the *Code of Virginia* codifies the State's role as a provider of assistance to the local governments by stating:

the Commonwealth shall act primarily in a supportive role by providing oversight for local government programs, by establishing criteria as required by this chapter, and by providing those resources necessary to carry out and enforce the provisions of the chapter.

The State's responsibilities as part of the cooperative nature of the Bay Act are further defined to include: the provision of financial and technical assistance to local governments as they develop policies for land use, development, and water quality protections; the development of procedures for localities to use in defining Chesapeake Bay Preservation Areas; and the use of administrative and legal proceedings to ensure local compliance with the department's regulations and policies. In addition, the *Code* requires the board to develop, promulgate, and keep current the performance criteria.

CHESAPEAKE BAY LOCAL ASSISTANCE BOARD AND DEPARTMENT

As discussed previously, the State has certain responsibilities under the Bay Act. To carry out these responsibilities, the *Code* created a nine-member citizen board and a State agency. CBLAD currently operates across three divisions to provide assistance and oversight to the Tidewater localities. It receives

appropriations from the General Assembly to perform those functions. However, the 2002 General Assembly appropriated \$1 million less to the department for FY 2003 than it had for FY 2002.

Organizational Structure of CBLAB and CBLAD

Oversight of CBLAD is provided by a citizen board whose members are appointed by the Governor. The department has 21 full-time equivalent (FTE) positions headed by an executive director, and is organized into three divisions: environmental engineering, environmental planning, and administration and finance. Currently three positions are vacant.

Chesapeake Bay Local Assistance Board. The powers to carry out the State's responsibilities as part of the Bay Act are vested with the Chesapeake Bay Local Assistance Board. Section 10.1-2103 of the *Code of Virginia* defines the duties and responsibilities of the board (Exhibit 1). The board consists of nine members who serve no more than two, four-year terms. The board is required to meet at least four times a year. The *Code* further states that:

members shall be representative of, but not limited to, citizens with an interest in and experience with local government, business, the use and development of land, agriculture, forestry, and the protection of water quality.

Exhibit 1	
Responsibilities of the Chesapeake Bay Local Assistance Board and the Department	
Board	Department
<ul style="list-style-type: none"> • Promulgating and maintaining current regulations that establish criteria for local Bay Act programs. • Providing technical and financial assistance to Tidewater local governments. • Providing technical assistance and advice to regional and State agencies on land use and water quality protection. • Ensuring that local government comprehensive plans, zoning ordinances, and subdivision ordinances comply with the Bay Act and board regulations. 	<ul style="list-style-type: none"> • Administering a competitive grants program for localities and planning district commissions. • Providing interpretations of the Bay Act and board regulations. • Reviewing local comprehensive plans and land use ordinances for compliance with the Bay Act and board regulations. • Providing advisory review of private development plans at the request of local governments. • Providing training for local government planners and engineers.
<p>Source: Chesapeake Bay Local Assistance Department, <i>A Guide to the Bay Act</i>.</p>	

The *Code* also requires the nine-member board to be comprised of at least one individual from each planning district in the Tidewater designation.

There are three sub-committees on which board members may serve that provide oversight of grant assistance and program consistency as well as recommendations for action to the full board. The grants committee reviews assistance applications from localities and planning districts and authorizes funding amounts based on CBLAD staff recommendations. The Northern Area Review Committee (NARC) and the Southern Area Review Committee (SARC) each have oversight responsibility for half of the Tidewater localities and, based on CBLAD staff recommendations, each committee provides recommendations to the full board on whether local programs are consistent with the board regulations.

Chesapeake Bay Local Assistance Department. The department was created by §10.1-2105 of the *Code of Virginia* to provide staff assistance to the board and carry out the requirements of the Bay Act. An executive director is responsible for the operations of the program and is charged by the *Code* with carrying out the day-to-day management and supervision responsibility of the department. The director is vested with all the authority of the board, when it is not in session. The manager of the environmental engineering division has been serving as the acting director since January 2002.

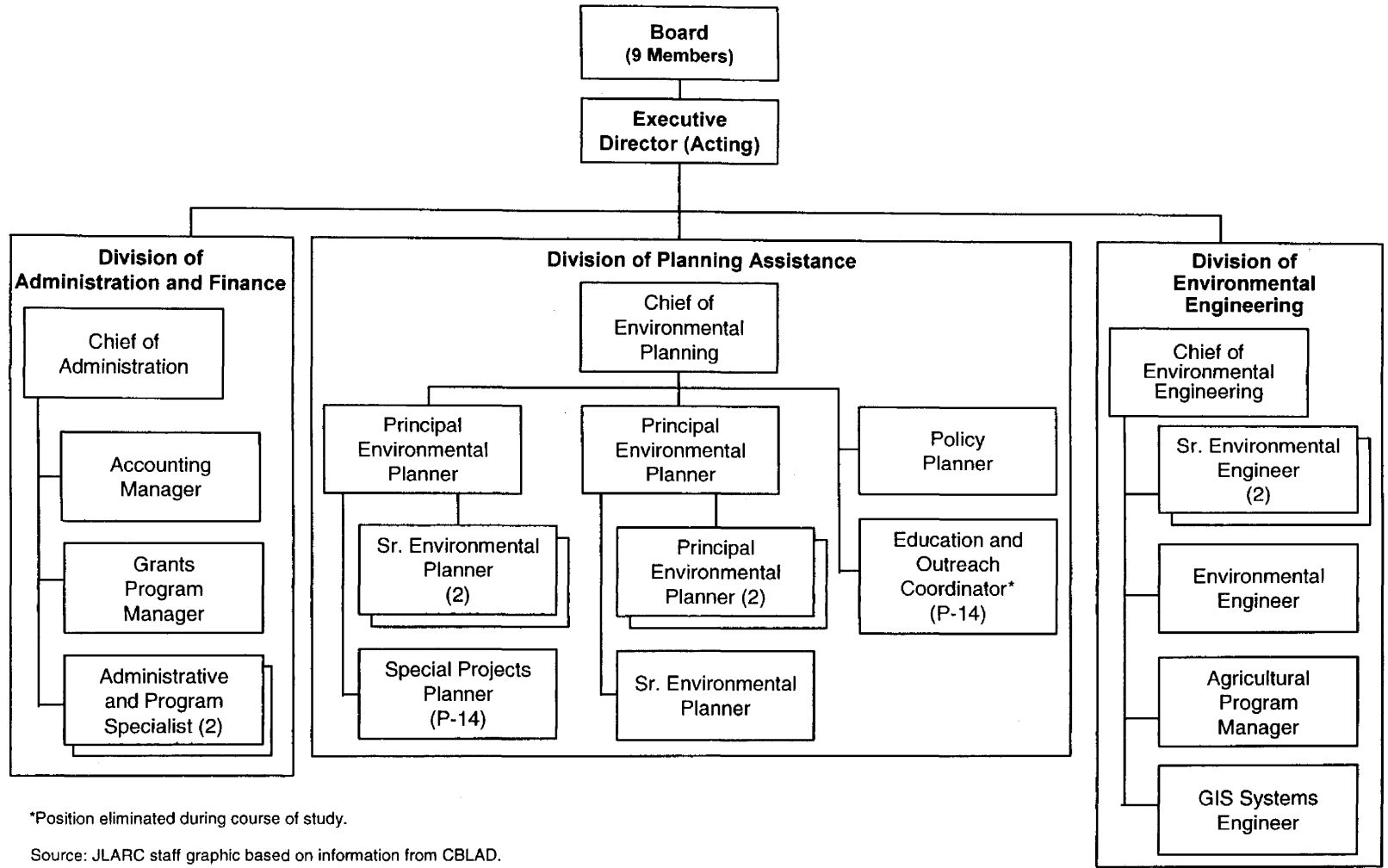
Organizationally, the department is comprised of three divisions, each headed by a manager who reports to the executive director (Figure 3). The environmental planning division, which consists primarily of the department's locality liaisons, monitors and provides technical assistance to the localities for the development, implementation, and compliance of the local Bay Act programs. There are nine full-time positions and one part-time position in this division. The environmental engineering division operates with six full-time positions and provides the local governments and other entities with technical assistance. This assistance includes review and comment on site plans and oversight of the agricultural elements of the Bay Act. Finally, the five positions in the administrative division are responsible for budget development and management, all fiscal and financial services, grant management, and other administrative activities.

All CBLAD positions are located in the department's office in Richmond. As of August 2002, CBLAD had three vacant full-time positions and had eliminated one of two part-time positions.

CBLAD Funding and Expenditures

The 2000 General Assembly appropriated more than \$2.6 million to fund CBLAD's FY 2001 and FY 2002 activities. In addition to these amounts, the department has also had access to almost all of its funds that remain unused from one fiscal year to the next. Of the amount appropriated, roughly 60 percent was to

Figure 3
Organization of the Chesapeake Bay Local Assistance Department



*Position eliminated during course of study.

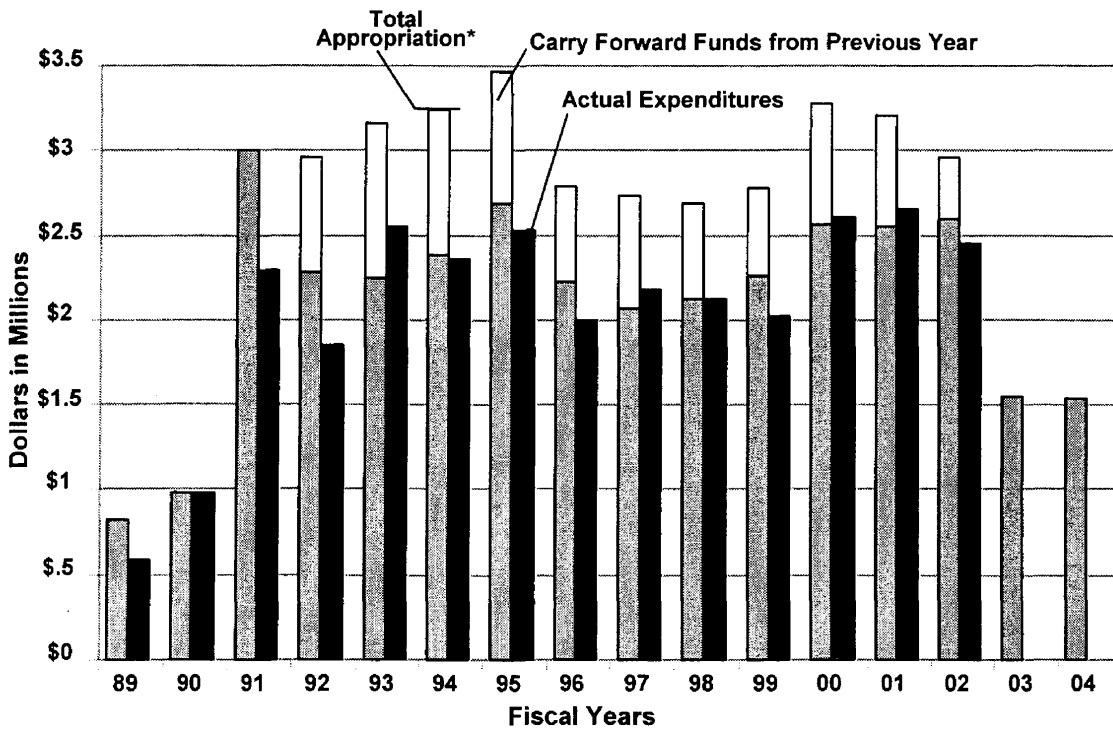
Source: JLARC staff graphic based on information from CBLAD.

fund internal operations, and the other 40 percent was to provide financial assistance to the local governments and other sub-state entities. For the FY 2003 and FY 2004 department activities, however, the 2002 General Assembly appropriated less than \$1.6 million per year. Of this amount, slightly more than \$40,400, or less than three percent, was made available for financial assistance.

Appropriations to CBLAD Programs Were Fairly Consistent Between FY 1992 and FY 2002. For FY 2001 and FY 2002, the 2000 General Assembly appropriated approximately \$2.6 million to CBLAD, compared to the \$2.3 million approved for FY 1992 (Figure 4). Although the FY 2002 amount represents more than a 15 percent increase from a decade earlier, the difference in the highest and lowest amounts that the department received during that time has only been about \$475,000. The annual average appropriation amount has been approximately \$2.3 million from FY 1992 through FY 2002.

Figure 4

CBLAD's Total Appropriations, Expenditures, and Carry Forward Funds, FY 1989 - FY 2004



Notes: Dollars are not adjusted for inflation in this graphic. Amounts for fiscal years 1989 and 1990 were used for staffing, office facilities, equipment, and other operational functions. Chapter 972 of the Acts of Assembly of 1990 includes language to allow the department to retain unexpended balances (carry forward). According to CBLAD's Chief of Administration, carry forward funds may be obligated to grants provided in previous years and therefore the whole amount is not available for reprogramming.

*Appropriation amounts include non-general funds.

Source: Data provided by CBLAD and amounts for fiscal years 2003 and 2004 are from Chapter 899 of the 2002 Virginia Acts of Assembly. Appropriations reflect technical adjustments.

Beginning in FY 1995, CBLAD's State funding was appropriated to two subprograms: Land Stabilization and Conservation and Financial Assistance for Land Management. (Prior to this time, department funding went to one program that funded all of the department's functions.) Funding for the Land Stabilization and Conservation program provides for technical assistance to the localities (such as local outreach projects, computer equipment purchases, or publishing educational materials) and CBLAD's operations (such as salaries and benefits, office rent, and equipment). In addition, CBLAD funds a water quality-monitoring program in Caroline County on the Polecat Creek from these amounts. State funding for Land Stabilization and Conservation has accounted for about 56 percent of CBLAD's annual appropriations between FY 1995 and FY 2002.

The Financial Assistance for Land Management program provides matching grant funding on a competitive basis to the local governments and planning district commissions (PDCs) for the development and implementation of local Bay Act programs. The program also provides funding to the soil and water conservation districts for the development of agricultural conservation plans. Since 1991, Tidewater localities and PDCs have received almost \$9 million through CBLAD's competitive grants program.

CBLAD Is Authorized to Maintain Unexpended Funds. Since 1993, language in the Appropriations Acts has reappropriated to the department the "unexpended balances" from the financial assistance to localities subprogram that constitutes additional funding amounts not reflected in the Acts. These unexpended balances, also known as a "carry forward," have accounted for slightly more than 19 percent of the department's total annual appropriations since FY 1992, as illustrated in Figure 4. (Carry forward funds identified in a single fiscal year represent a rolling amount available to CBLAD in that year, and cannot be summed across years.) Periodically, unexpended funds from the Land Stabilization and Conservation program have also been available to the department.

The manager of CBLAD's administrative division and also the manager of the competitive grants program told JLARC staff that there are several reasons why the department may have unexpended funds at the end of a fiscal year. Unexpended amounts may reflect an on-going grant to which dollars are still obligated and not available in the new fiscal year. Moreover, a grant recipient (a locality or PDC) may not be able to fill a position funded through a CBLAD grant and thus cannot collect the funds because the work required cannot be completed within that fiscal year.

Amounts of CBLAD Expenditures Have Varied. Between FY 1992 and FY 2002, CBLAD's total expenditures for its four broad functional areas, financial assistance to localities, technical assistance, water quality monitoring, and operations, have fluctuated. They have, however, averaged almost \$2.3 million annually (Figure 4). From FY 1992 to FY 2001, department spending for personal services within the operations function has increased by 48 percent, or more than \$300,000. According to CBLAD documents, the average annual amount of funding made available for local grants was \$735,000 between FY 1991 and FY 2002.

FY 2003 Appropriations for Financial Assistance to Localities Was \$40,462. Between FY 1995 and FY 2002, the amount appropriated through the financial assistance grants program averaged about \$1.06 million annually. Grants to localities and planning district commissions during that time accounted for approximately 55 percent of the \$1.06 million. The remaining amounts were primarily programmed for the agricultural conservation program.

However, the 2002 General Assembly appropriated \$40,462 for the financial assistance to localities program for both FY 2003 and FY 2004. During the spring of 2002, CBLAD responded to this funding change by eliminating the agricultural grants program and reducing the number of local grant awards from 21 to two. Despite this substantial funding reduction, CBLAD has stated its intention to reprogram the \$60,000 it was to receive through a federal grant and combine that amount with grant money from DCR and DEQ to provide \$230,000 for 12 competitive grants in FY 2003.

JLARC REVIEW

Pursuant to the HJR 622 study mandate, this JLARC review focuses on local and State performance in implementing and enforcing the Bay Act. The study is not a review of the effectiveness of the Bay Act or the impact of the Act upon water quality.

There are good reasons why a review of Bay Act implementation and enforcement is appropriate at this time, whereas a review of Bay Act effectiveness would be premature. Under the Act, CBLAB and CBLAD have worked with localities to ensure that water quality protections are established in local land use planning, and to ensure that certain protective measures are undertaken, such as the use of a 100-foot buffer zone in sensitive land areas along waterways. Initial implementation of local programs under the Act has been gradually accomplished over the last decade. The local programs, then, are relatively new, and there has been a mixed record to date of enforcement by localities and limited involvement in these issues by the State. More time and better enforcement, then, appear to be necessary before the impact of the Bay Act program can be adequately gauged. It should also be noted that even at a later point, there are difficulties that are inherently involved in measuring the impact upon water quality that is achieved by avoiding improper land uses or the use of specific water quality protection activities, particularly given the wide range of factors with a potential effect. For these reasons, the extent of the impact that Virginia's Bay Act program has had upon the Bay and its tributaries cannot be stated with certainty at this time, and may not be known for many years to come.

It is known, however, that certain activities that the Bay Act promotes, such as the use of buffer zones, can be effective in protecting water quality, under the right conditions. Therefore, how well the Act is implemented and enforced is a concern. This JLARC review of the implementation of the Chesapeake Bay Preservation Act involved an assessment of the factors that have impacted local

compliance, the administration and enforcement of the local programs, CBLAD's administration of its statutory mission, and the department's assessment of potentially expanding the requirements of the Bay Act.

A number of activities were undertaken as part of this study in order to obtain a comprehensive understanding of the implementation and enforcement of the Bay Act by CBLAD and the Tidewater localities. These research activities included: structured interviews, surveys, attendance at meetings and workshops, locality file review and data analysis work, a review of CBLAD's *Expansion* report, and reviews of other states' water quality protection actions similar to the Bay Act.

Structured Interviews

JLARC staff interviewed staff from CBLAD, Tidewater localities, other Virginia agencies involved with water quality protection, planning district commissions, and soil and water conservation districts.

JLARC staff interviewed both the acting director and the previous director of CBLAD and also interviewed current and past board members, including the chair. Other CBLAD staff interviewed included: the Chief of Administration, the Chief of Environmental Planning, three environmental engineers, four environmental planners, the Grants Program Manager, and the Agricultural Program Manager. JLARC staff also interviewed two VCU environmental scientists involved with CBLAD's Polecat Creek Project.

Staff directly involved with the implementation of the local Bay Act programs from the following localities were also interviewed: the cities of Alexandria, Chesapeake, Norfolk, Poquoson, Richmond, and Virginia Beach and the counties of Fairfax, Gloucester, Henrico, James City, Lancaster, Mathews, Prince George, and Spotsylvania. These local staff included: planning directors and other planning staff, zoning administrators, watershed and environmental programs administrators, inspectors for erosion and sediment control, and public works staff. The county administrator and planning director from Louisa County, which is outside of the Tidewater designation, were also interviewed.

JLARC staff interviewed staff members from other agencies and organizations that are associated with water quality protection and that provide planning assistance for the Tidewater localities subject to the Bay Act. Personnel interviewed included: the Secretary of Natural Resources, Department of Environmental Quality staff, Department of Conservation and Recreation staff, Virginia Department of Health staff, Virginia Marine Resources Commission staff, Chesapeake Bay Commission staff, staff from two planning district commissions, and staff from two soil and water conservation districts. In addition, JLARC staff interviewed other parties with a potential interest in the study issues, including: staff of the Virginia Association of Counties, staff of the Virginia Municipal League, a member of the Home Builders Association of Virginia, and staff of the Chesapeake Bay Foundation.

Surveys

JLARC staff conducted an e-mail survey of the 84 Tidewater localities subject to the Bay Act. Hard copies of the survey were mailed to those localities that did not have e-mail capabilities. JLARC staff received 52 responses to this survey, for an overall response rate of 62 percent (Appendix B). Responses received by type of jurisdiction were: 16 of 17 cities (94 percent), 21 of 29 counties (72 percent), and 15 of 38 towns (39 percent). The survey consisted of five parts and asked questions regarding the overall implementation and performance of the Bay Act, CBLAD's assistance and oversight of the local Bay Act programs, the localities' use of local and State resources, the localities' staffing and workload measures, and the localities' programs.

A mail survey was conducted of all 104 local governments identified by CBLAD as subject to a potential expansion of the Bay Act. JLARC staff received 71 responses to this survey, for an overall response rate of 68 percent (Appendix B). Responses received by type of jurisdiction for this survey were: 9 of 11 cities (82 percent), 31 of 36 counties (86 percent), and 31 of 57 towns (54 percent). The survey consisted of questions regarding the localities' familiarity with the Bay Act, the localities' perceptions regarding expansion of the Bay Act and its impacts, the status of the localities' comprehensive plans and land use ordinances, and the localities' organization and resources available to comply with the Bay Act.

Attendance at Meetings and Workshops

To gain an understanding of CBLAD's role in providing oversight of and assistance to the Tidewater localities, JLARC staff observed: four meetings of the Chesapeake Bay Local Assistance Board, a Chesapeake Bay Local Assistance Board Policy Committee meeting, several Area Review Committee meetings, a Grants Review meeting, and a meeting of the Thomas Jefferson Planning District Council attended by CBLAD staff in conjunction with their western expansion study. JLARC staff also attended the May training workshop CBLAD conducted for the Tidewater localities.

Locality File Review and Data Analysis

JLARC staff conducted file reviews in the following Tidewater localities: the cities of Alexandria, Chesapeake, Richmond, and Virginia Beach, and the counties of Fairfax, Gloucester, Henrico, James City, Lancaster, Prince George, and Spotsylvania. During each file review, JLARC staff reviewed applications for encroachment activity into Resource Protection Areas between the dates of July 1, 1999 and June 30, 2001. Documents reviewed included plans of development, such as building permits and site plans, and letters of correspondence between the locality and the applicant regarding the approval or denial of encroachment into the RPA. These documents were reviewed against the regulations in effect prior to March 2002.

In choosing localities for file reviews, JLARC staff originally planned to randomly select localities stratified by the percentage of the locality's total land area designated as an RPA. However, these percentages were not readily available. A random selection based on the locality's total land area designated as a protection area under the Act also did not appear to be appropriate because several localities have designated the entire locality as a CBPA. As a result, JLARC staff selected a subset of localities based on the following criteria:

- The subset needed to contain a mixture of urban, suburban, and rural localities;
- Localities in the subset needed to be geographically dispersed;
- Localities in the subset needed to be dispersed among the eight PDC's serving Tidewater; and
- Additional localities were recommended by CBLAD staff.

Review of the *Chesapeake Bay Preservation Act - Expansion Report*

HJR 622 directed CBLAD to assess, and provide to JLARC for review, the benefits to the environment, the changes in regulations, and the financial resources associated with extending the requirements of the Bay Act to the entire Chesapeake Bay watershed in Virginia. CBLAD provided JLARC with this assessment in a report, the *Chesapeake Bay Preservation Act - Expansion*. JLARC staff reviewed CBLAD's report, in conjunction with the results of JLARC's western locality survey, to develop recommendations regarding the expansion of the Bay Act.

Other States' Practices

To compare and contrast CBLAD's resource levels, policies, and effects on water quality protection, JLARC staff reviewed programs in Pennsylvania and Maryland, which like Virginia are signatories of the *Chesapeake Bay Agreement*. JLARC staff also reviewed water quality programs in North Carolina, which contains another large estuary.

II. Local Implementation and Enforcement of the Bay Act

The *Code of Virginia* places the primary responsibility for implementing and enforcing the requirements of the Chesapeake Bay Preservation Act (Bay Act) on the 84 cities, counties, and independent towns in Tidewater, Virginia. Specifically, local governments must designate and protect environmentally sensitive land areas, known as Chesapeake Bay Preservation Areas (CBPAs), which are comprised of Resource Protection Areas (RPAs) and Resource Management Areas (RMAs). The RPAs consist of land areas at or near the shoreline that serve as “filters,” preventing nonpoint source pollution from entering the Bay and its tributaries. RMAs are located landward of the RPAs and consist of less sensitive land areas. In addition to designating CBPAs, the Bay Act requires localities to incorporate water quality protection measures into their comprehensive plans and land use ordinances.

To assist localities with implementing the requirements of the Bay Act, the Chesapeake Bay Local Assistance Board (CBLAB) promulgated regulations that require localities to adopt local programs that protect CBPAs. To facilitate the development of local Bay Act programs, the regulations allow localities to structure their programs to meet the needs of their jurisdictions. As a result, a variety of structures have been developed by localities to administer their programs.

Local program implementation of the Bay Act has been characterized by slow progress. Implementation efforts have been directed toward completing three phases: designating and protecting environmentally sensitive land areas and adopting performance criteria; incorporating water quality protection measures into comprehensive plans; and achieving initial program completion by revising all land use ordinances to comply with the Bay Act. Originally, local governments were required to initially complete the first implementation phase in 1990. However, it was not until 1997 that all localities had local programs in place, and it was not until 2002 that all localities became completely consistent with Phase I requirements. The slowness of the progress was due to some factors that were under the State’s control, and to some factors that were under local control. These factors included: overly optimistic assumptions about the time frame required to develop and promulgate regulations; the complexity of the program; variations in the priority level given to the program over time by the State; mixed attitudes by the localities about participating in the Bay Act program; and fulfilling its requirements, and resource constraints.

The enforcement record of localities can be best described as “mixed.” JLARC staff reviewed local RPA encroachment files to determine if localities followed CBLAB regulations governing building projects in these areas. The file review revealed that while some localities appear to enforce this requirement, others do not and allow development to encroach into the RPAs, in a manner contrary to CBLAB regulations. Localities enforce their programs by ensuring that development activities within the CBPAs comply with “performance criteria” contained in the board regulations. However, data collected through a survey revealed that some localities are not consistently applying these criteria to development projects.

CBLAB's latest revision of its regulations, adopted in December 2001, provides for a moderate shift in focus from local program implementation activities to local enforcement issues and activities. This shift appears to be overdue. One of the features of the new regulations is a provision that the State can assess the extent to which localities are ensuring that there is "on-the-ground" compliance with the Bay Act by property owners and other potential land disturbers, and can address weaknesses in locality enforcement. In recognition of the potential resource demands of the new regulatory requirements, CBLAB has postponed the final program implementation phase. During the JLARC review, localities indicated that the program compliance review will be beneficial. However, they also expressed concerns that this process and other requirements of the new regulations will overextend the local and State resources that are available.

LOCAL GOVERNMENTS ARE RESPONSIBLE FOR PLANNING, IMPLEMENTING, AND ENFORCING THE REQUIREMENTS OF THE BAY ACT

The *Code of Virginia* requires all 84 Tidewater localities to implement the provisions of the Bay Act by designating and protecting Chesapeake Bay Preservation Areas (CBPA) and incorporating water quality protection measures into their comprehensive plans and land use ordinances. To assist local governments with this task, the Chesapeake Bay Local Assistance Board (CBLAB) promulgates regulations that provide localities with guidance on developing local programs that protect these areas.

Under the Bay Act, local governments have flexibility to develop programs that meet the needs of their jurisdictions. As a result, a variety of administrative structures have been adopted by localities to manage their Bay Act programs. In addition to allowing localities to develop administrative structures based on local needs, CBLAB regulations authorize localities to use "regulatory relief mechanisms" such as "exceptions" and "administrative waivers" in cases where proposed CBPA development cannot meet the requirements of the program. Finally, the *Code of Virginia* authorizes local governments to levy civil penalties against property owners and developers who violate local programs.

Local Implementation of the Bay Act

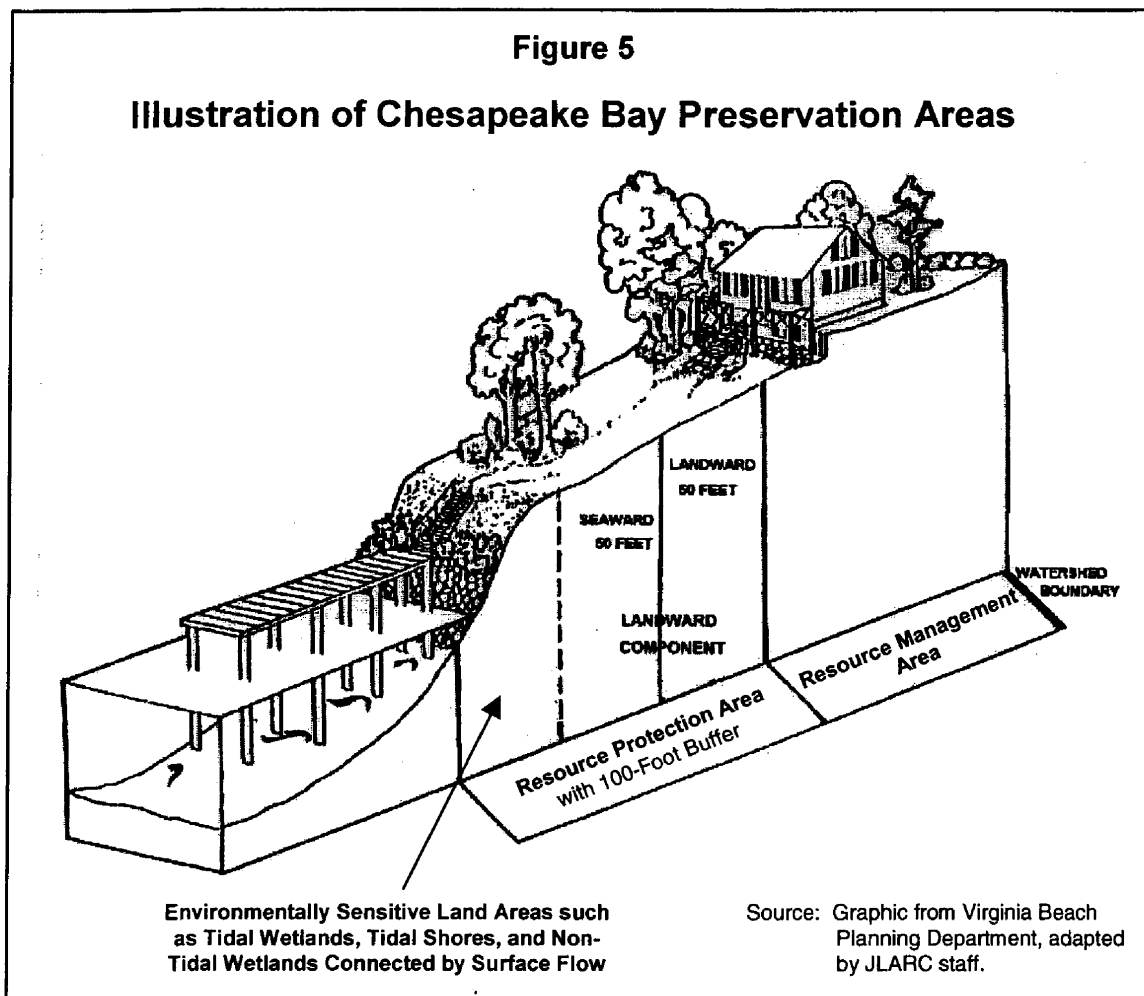
Section 10.1-2100(B) of the *Code of Virginia* places the primary responsibility for "planning and for implementing the provisions of [the Bay Act]" on the Tidewater localities. The *Code* specifically requires localities to implement the provisions of the Bay Act by designating CBPA's and incorporating water quality protection measures into their local comprehensive plans and land use ordinances. Development of these elements, or local programs, is guided by regulations promulgated by CBLAB.

In addition, the *Code* authorizes localities outside the Tidewater region to incorporate CBLAB water quality protection criteria into their comprehensive plans

and land use ordinances. According to CBLAD staff, Albemarle County is the only participating non-Tidewater locality to adopt part of the State's program.

A key function of the local programs is the protection of CBPAs, which are comprised of Resource Protection Areas (RPAs) and Resource Management Areas (RMAs). The delineation of CBPAs is performed by local government staff or by private engineers, surveyors, or landscape architects using measures established in CBLAB regulations and policy guidance documents. RPAs consist of environmentally sensitive land areas along shorelines or perennial streams that serve as "filters" by removing pollutants from runoff before they enter the Bay and its tributaries (Figure 5). Because RPAs perform an important water quality function and since the potential impact that land disturbing activities could have on the Bay's water quality, the regulations restrict development in these areas "to water dependent uses, such as marinas and piers, or the redevelopment of already developed areas."

A central component of the RPA is the 100-foot buffer, a "transitional zone" between development activities and environmentally sensitive areas. Local government staff or private engineers and surveyors delineate buffers by measuring 100-foot horizontally from the most landward RPA feature, such as tidal wetlands, or from the edge of defined streambeds where wetlands or other environmentally sensi-



tive features are not present. Numerous field studies have shown that buffers can be an effective means for reducing runoff. Under the right conditions and circumstances, these buffers can trap sediments, and nitrogen and phosphorus nutrients, thereby keeping these materials out of the water. While there is no single "ideal" buffer width for all situations, a 100-foot buffer zone is within the typical range that is described as effective in the scientific literature. For example, one reviewer of the scientific literature has reported that:

Riparian buffers are generally very effective at trapping sediments in surface runoff and at reducing channel erosion. Studies have yielded a range of recommendations for buffer widths; buffers as narrow as 4.6 m (15 ft) have proven fairly effective in the short term, although wider buffers provide greater sediment control, especially on steeper slopes. Long-term studies suggest the need for wider buffers. It appears that a 30 m (100 ft) buffer is sufficiently wide to trap sediments under most circumstances.... A minimal width of 15 m (50 ft) is probably necessary for most buffers to reduce nitrogen levels. Wider buffers of 30 m (100 ft) or greater would be more likely to include other areas of denitrification activity and provide more nitrogen removal. [Wenger, Seth, *A Review of the Scientific Literature on Riparian Buffer Width, Extent and Vegetation*, March 1999]

A handbook for maintaining riparian forest buffers in the Bay region similarly notes that:

The most commonly prescribed minimum buffer widths for use in water quality and habitat maintenance are approximately 75 to 100 feet. The scientific literature appears to support that buffers of less than 35 feet cannot sustain long-term protection of aquatic resources. To provide an array of functions [for example, including nitrogen and sediment removal] then, buffers should be a minimum of 35 to 100 feet in width under most circumstances. Buffer widths toward the lower end of the range appear to provide some physical and biological components of the stream ecosystem, especially on small streams. Buffer widths at the upper end of the range are likely to provide protection of physical, chemical, and biological characteristics of the aquatic resource. [Palone and Todd, *Chesapeake Bay Riparian Handbook: A Guide for Establishing and Maintaining Riparian Forest Buffers*, June 1998]

The RPA buffer established by the Bay Act consists of a "50-foot landward" and a "50 foot-seaward" component. The regulations allow for encroachment into the 50-foot landward component of the RPA buffer on building lots recorded prior to October 1, 1989 (pre-Bay Act lots). The regulations still allow development to encroach into the RPA buffer on building lots recorded after this date (post-Bay Act lots), but such encroachments are under more rigorous restrictions. This element of the program has proven to be controversial due to the limitations it places on development activity along shorelines and perennial streams.

RMAs are contiguous to the RPAs' inland boundaries and consist of "land types that if improperly used or developed, have a potential to significantly degrade water quality." Development is not restricted in the RMAs, but it must still comply with local land use ordinances.

CBLAB regulations define the elements that must be in all local Bay Act programs. These elements include CBPA maps, zoning and subdivision ordinances that incorporate CBLAB performance criteria, and comprehensive plans that address specific areas outlined in the board regulations for protecting water quality. Local governments must also establish a "plan of development process" for reviewing proposed CBPA land disturbing activities to ensure that they will occur in an environmentally responsible manner before issuing building permits (Exhibit 2).

In addition to designating CBPAs, localities must incorporate CBLAB performance criteria into their land use ordinances to manage development activities and to protect the quality of State waters within these areas (Exhibit 3). For example, localities must ensure that land use activities preserve all indigenous vegetation to the maximum extent practicable, use best management practices to reduce runoff from construction activities, and minimize impervious cover. The performance criteria apply to all lands within the CBPA and "work to reduce nonpoint source pollution at its origins."

Exhibit 2

Local Bay Act Program Requirements

1. A map delineating Chesapeake Bay Preservation Areas (CBPA).
2. CBPA performance criteria developed by CBLAB.
3. A comprehensive plan or revision that incorporates the protection of CBPAs and the quality of State waters in accordance with CBLAB criteria.
4. A zoning ordinance that incorporates measures to protect the quality of State waters in CBPAs and complies with CBLAB regulations.
5. A subdivision ordinance that incorporates measures to protect the quality of State waters in CBPAs and ensures that all subdivisions in those areas comply with CBLAB regulations.
6. An erosion and sediment control ordinance that complies with CBLAB regulations.
7. A plan of development process to ensure that the use and development of land in CBPAs is accomplished in a manner that protects the quality of State waters.

Source: Chesapeake Bay Preservation Area Designation and Management Regulations, Section 9 *Virginia Administrative Code* (VAC) 10-20-60, December 10, 2001.

Exhibit 3**Bay Act Performance Criteria**

1. No more land shall be disturbed than is necessary to provide for the desired land use.
2. Indigenous vegetation shall be preserved to the maximum extent possible.
3. Localities must ensure that best management practices requiring periodic maintenance are maintained through agreements with the landowner or developer.
4. All development exceeding 2,500 square feet shall be accomplished through a plan of development process.
5. Land development shall minimize impervious cover.
6. Any land disturbing activity that exceeds 2,500 square feet (including construction of single-family homes and septic tanks and drainfields) shall comply with the local erosion and sediment control ordinance.
7. On-site sewage treatment systems not requiring a Virginia Pollution Discharge Elimination System (VPDES) permit shall be pumped out at least once every five years and must provide a reserve sewage disposal site for new development.
8. Stormwater Management criteria consistent with the water quality protection provisions of the Virginia Stormwater management regulations must be followed.
9. Agricultural lands shall have a soil and water quality conservation assessment conducted.
10. Silvicultural activities are exempt provided they adhere to the water quality protection procedures prescribed by the Department of Forestry.
11. Local governments shall require evidence of all wetlands permits required by law prior to authorizing grading or other on-site activity.

Source: Chesapeake Bay Preservation Area Designation and Management Regulations, Section 9 VAC 10-20-120, December 10, 2001.

Administration of Local Bay Act Programs

The General Assembly designed the Bay Act program to “recognize local government responsibility for land use decisions.” According to CBLAD’s *A Guide to the Bay Act*, the regulations “establish a framework” for localities to follow for developing local Bay Act programs and “do not dictate precisely what local programs must look like.” As a result, Tidewater localities were allowed to develop a variety of programs to administer the Bay Act. For example, a few localities such as the City of Virginia Beach created special “Bay Act” citizen boards and adopted stand-alone “Chesapeake Bay Preservation Area Ordinances.” Other localities, such as Henrico County, administer their Bay Act programs through planning commissions, zoning ordinances, and public works departments. Still other localities such as Mathews County use planning departments, zoning ordinances, and zoning appeals boards to administer their Bay Act programs.

In cases where proposed RPA development cannot meet the program’s requirements due to unique circumstances, CBLAB regulations authorize jurisdictions

to issue developers either "exceptions" or "administrative waivers" on a case-by-case basis. Exceptions are administrative decisions made by local public review boards such as legislative bodies, planning commissions, or other bodies designated by the local government that authorize deviations from the rules governing RPA building activity. The regulations also provide localities with criteria for determining whether to grant RPA exception requests (Exhibit 4). Localities may also issue administrative waivers for development of lots or parcels in the RPAs that were recorded prior to the adoption of the board regulations on October 1, 1989. Administrative waivers differ from exceptions because they are granted by local staff and not by public review boards.

Exhibit 4

Authorized Exceptions to the Bay Act

1. The requested exception to the criteria is the minimum necessary to afford relief.
2. Granting the exception will not confer upon the applicant any special privileges that are denied by [CBLAB regulations] to other property owners who are subject to its provisions and who are similarly situated.
3. The exception is in harmony with the purpose and intent of [CBLAB regulations] and is not of substantial detriment to water quality.
4. The exception request is not based upon conditions or circumstances that are self-created or self-imposed.
5. Reasonable and appropriate conditions are imposed, as warranted, that will prevent the allowed activity from causing a degradation of water quality.
6. Other findings, as appropriate and required by the local government are met.

Source: Chesapeake Bay Preservation Area Designation and Management Regulations, Section 9 VAC 10-20-150(C), December 10, 2001.

Local Enforcement of the Bay Act

In addition, §10.1-2109(E) of the *Code of Virginia* authorizes local governments to enforce their Bay Act programs by assessing property owners and developers with civil penalties not exceeding \$5,000 per day for each violation or a one-time payment of \$10,000 for each violation. The localities are authorized to include this provision in the land use ordinances that they adopt to comply with the Bay Act. Some jurisdictions incorporate additional penalty provisions into their Bay Act programs. For example, James City County assesses either civil charges or injunctions against property owners who violate its Bay Act program, while Mathews County assesses criminal charges, civil charges, or injunctions against land owners who violate its program.

PROGRAM IMPLEMENTATION HAS BEEN SLOW

Under the Bay Act, localities designate CBPAs and adopt local programs that protect these areas. To assist local governments with this task, CBLAB regulations established a “three phase implementation process” that localities follow to develop their Bay Act programs. All Tidewater localities were initially required to complete the first phase of this process by September 1990, but this deadline was not realistic, especially when the regulations were contested in court. Most localities, in fact, did not complete the first phase until several years later due to various factors such as limited financial resources, high staff turnover, lengthy public reviews of their proposed programs, inadequate State technical assistance, or local resistance to the Bay Act. CBLAB did not initiate legal or administrative action against localities for failing to meet this deadline; instead, it continued working with them until their local programs complied with the provisions of the Bay Act. Thus, it was not until 1997 that all localities adopted Bay Act programs, and it was not until 2002 (14 years after the enactment of the Bay Act) that all localities became consistent with the initial program implementation phase. Local implementation of the second phase of the program has also gone more slowly than expected for similar reasons.

In addition, CBLAD staff reported that work on the third implementation phase has been postponed because all localities must now revise their Bay Act programs to reflect recent amendments to the Bay Act regulations adopted by the board in December 2001. After the localities achieve an initial review and consistency by CBLAB with the Bay Act and regulations, the program will become iterative and ongoing. It will involve localities reviewing all of their land use ordinances and regulations to assure that there are no internal conflicts or inconsistencies pertaining to the Bay Act regulations. Localities will also be adding more specific language pertaining to the implementation of the program’s general requirements, and will be updating their comprehensive plans every five years as required in the *Code of Virginia*.

JLARC staff surveyed all Tidewater local governments and conducted site visits to selected jurisdictions to determine if localities have adequate resources to administer their Bay Act programs. The results of the data collected through this process revealed that many localities believe their programs are inadequately staffed and funded to meet the requirements of the Bay Act. In fact, several localities indicated that future local support of their Bay Act programs may be in jeopardy due to current economic conditions. Some of these localities argue that the State, pursuant to its statutory requirement to provide “those resources necessary to carry out and enforce the provisions” of the Bay Act, should provide them with a sustained source of funding to hire staff needed to continue to implement, administer, and enforce their Bay Act programs.

Local Programs Must Be Consistent with State Regulations

Under the Bay Act, localities must designate CBPAs and adopt local programs that protect these areas. To assist local governments with this task, section 9

VAC 10-20-231 of the regulations establishes a “management program” that localities must follow to develop local Bay Act programs (Exhibit 5).

Exhibit 5

CBLAB’s Process for Localities to Ensure Compliance With the Bay Act

Phase I: Localities designate CBPAs and adopt CBLAB’s water quality performance criteria. As part of this phase, localities must:

- a. use existing data and mapping resources to identify and describe tidal wetlands, nontidal wetlands, tidal shores, water bodies with perennial flow, flood plains, highly erodible soils, steep slopes, highly permeable areas, and other sensitive environmental resources;
- b. determine, based upon the identification and description, the extent of CBPAs within their jurisdictions;
- c. prepare appropriate map(s) delineating CBPAs;
- d. prepare amendments to local ordinances that incorporate CBLAB’s performance criteria;
- e. establish a plan of development review process to ensure that any proposed CBPA land development will be accomplished in an environmentally friendly manner that protects water quality;
- f. conduct a public hearing to solicit public comment before formally adopting CBPAs and performance criteria; and
- g. provide copies of the adopted local program documents to CBLAB for consistency review.

Phase II: Local governments incorporate CBLAB’s water quality protection measures into their comprehensive plans to comply with §10.1-2109 of the *Code of Virginia* and the board regulations. Localities must provide copies of their revised plans to CBLAB for consistency review.

Phase III: Local governments revise all land use ordinances and regulations on an on-going basis to comply with §10.1-2109 of the *Code of Virginia* and to assure internal consistency with the board regulations. Localities must provide copies of their revised ordinances and regulations to CBLAB for consistency reviews.

Note: CBLAB’s regulations that became effective on October 1, 1991 do not contain references to this specific three-phase implementation process. However, CBLAB still evaluated local program compliance in terms of these phases.

Source: Section 9 VAC 10-20-231 of the Chesapeake Bay Preservation Area Designation and Management Regulations, December 10, 2001.

The management program consists of three phases. In Phase I, localities designate CBPAs and adopt CBLAB performance criteria to protect the quality of State waters within these areas. In Phase II, localities incorporate water quality protection measures into their comprehensive plans. In Phase III, localities revise all of their land use ordinances and regulations to comply with the Bay Act and board regulations and submit copies of them to CBLAB for consistency reviews.

As localities address these requirements, they submit their programs to CBLAB for review to ensure compliance with the Bay Act and board regulations. Based on its review, CBLAB classifies localities as either "consistent," "consistent with conditions," or "inconsistent." If CBLAB finds a local program "consistent with conditions" or "inconsistent," it determines what changes are needed and sets a deadline for the locality to resubmit its program for review.

Several Factors Appear to Have Caused Slow Progress in Achieving Phase I and II Program Consistency

Section 10.1-2109 of the *Code of Virginia* required all Tidewater localities to complete Phase I by September 20, 1990, but initial program implementation was slow, with most localities failing to meet this deadline. Reasons for this varied. The CBLAD acting director said the State's original Phase I deadline was unrealistic because many localities lacked the resources needed to designate CBPAs and adopt performance criteria within a short timeframe. For example, all localities needed access to federal National Wetlands Inventory (NWI) maps and soil data before they could designate CBPAs; however, localities such as the cities of Arlington, Alexandria, Portsmouth, and Norfolk were unable to obtain this information by the deadline. In fact, CBLAD reported in 1990 that:

National Wetlands Inventory maps are incomplete [for these localities] and soil surveys were never conducted because of their urbanized character, rendering the designation of RMA features difficult if not impossible.

Localities also needed to have land use ordinances in place before they could adopt performance criteria to protect CBPAs. Yet some localities, such as Richmond County and the towns of Belle Haven, Bloxom, and Tangier, did not have land use ordinances, which had to be prepared and adopted through a public review process before Phase I could be completed. CBLAD reported in 1989 that "a number of towns do not now have [land use] ordinances, which are required by the Act. This task alone will be formidable." CBLAD further reported in 1990 that:

there appear to be a number of local governments, which will likely not meet the September 20 deadline. These localities face a variety of technical and administrative constraints unique to local circumstances. The Counties of King William, King and Queen, Essex, Middlesex, Gloucester, and Mathews will likely be unable to meet the September 20 deadline because of the start-up time which was necessary to initiate the Middle Peninsula geographic information system [to designate and map CBPAs]. A number of

incorporated towns within Tidewater will be unable to meet the deadline because of the extreme lack of technical expertise or the absence of an on-going working relationship with the counties in which they are located. Such constraints are most acute with the towns of the Eastern Shore, which in many cases lack essential land use planning mechanisms.

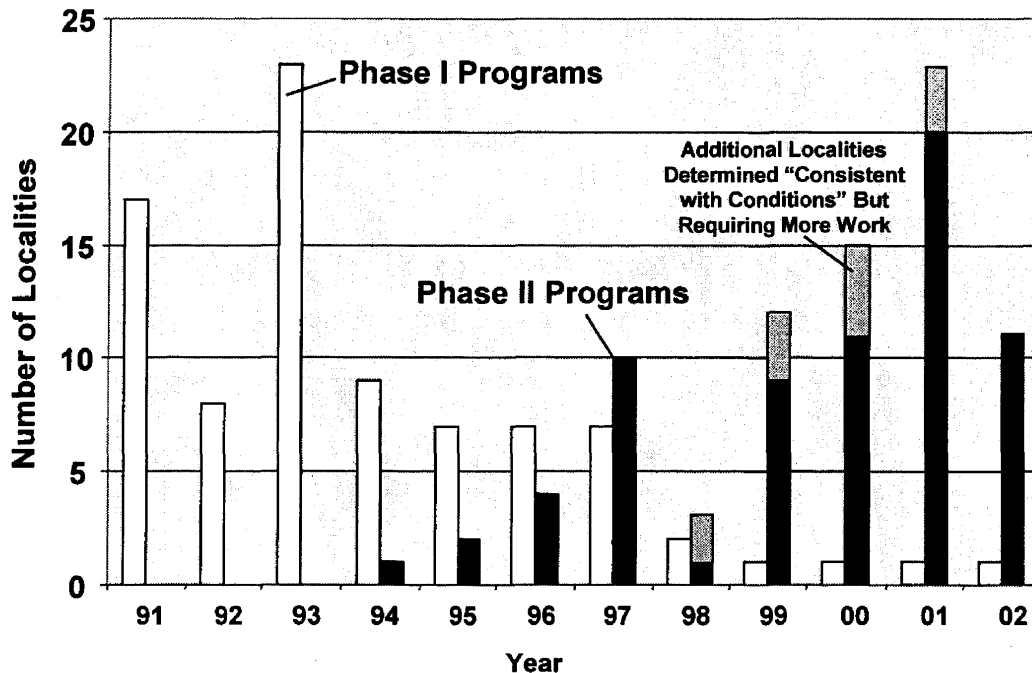
As can be seen, the technical aspects of the program presented a formidable obstacle for some localities to overcome before they could complete Phase I. CBLAD tried to facilitate local implementation of this phase by developing a "model" Bay Act ordinance that localities could adopt to protect their CBPAs. The department also provided localities with a "local assistance manual" that contained information on designating CBPAs and developing and implementing water quality protection measures. However, some localities were still slow in implementing Phase I requirements because of limited staff, lengthy public reviews of proposed programs, or inadequate technical assistance from CBLAD.

Other hurdles also slowed initial Phase I implementation, such as a resistance to the Bay Act by some special interest groups, State officials, and local government officials. For example, a group of York County property owners and developers sued CBLAB in September 1990, arguing that the board failed to comply with the Virginia Administrative Process Act because it adopted its regulations 29 days into a State required 30-day public comment period. The York County Circuit Court ruled that CBLAB adopted its regulations one day too soon, and the board was forced to enact emergency regulations in November 1990 to keep implementation of the program from stalling. CBLAB finally adopted its official regulations in October 1991 and set November 15, 1991 as the new Phase I compliance deadline. (Because many localities failed to meet this deadline, CBLAB has not set a "common" deadline for the completion of the remaining program development phases since this time.) Legislation was also introduced during the 1991 General Assembly to allow Tidewater localities to become exempt from the Bay Act if their streams met "certain cleanliness standards." Some localities may have delayed complying with Phase I until the General Assembly acted on this proposed legislation. (This legislation was not passed by the 1991 General Assembly.)

According to newspaper articles from the early 1990s, some local governments resisted adopting Bay Act programs because they felt the State overstepped its authority by placing land development restrictions on them. Localities feeling the fiscal constraints of the recession in the early 1990s believed the State was limiting their tax bases by restricting development of land along shorelines and perennial streams. Some localities adopted "minimal" CBPAs and ordinances limiting the amount of land within their jurisdictions subject to the Bay Act. For example, Charles City County adopted a CBPA that did not adequately cover all environmentally sensitive land areas within its jurisdiction. Between 1989 and 1993, Charles City submitted its CBPA map and land use ordinance several times to CBLAB for a Phase I consistency review, but each time the board rejected the county's program and required it to make changes to become Phase I consistent. CBLAB finally initiated legal action against Charles City in 1993 to force it to adopt a CBPA map and land use ordinance that complied with the board regulations, but the county revised its program to the board's satisfaction before the case went to court.

As a result of these factors, it was not until 2002 that all 84 localities finally achieved initial Phase I consistency (Figure 6). However, CBLAD's acting director reported that all Tidewater localities had adopted Phase I program elements by 1997 even though CBLAB had not determined that all of the programs were fully consistent with the Bay Act and board regulations. Some localities had additional conditions to fulfill. The data in Figure 6 shows that most of the Tidewater localities developed local programs that were consistent with CBLAB's Phase I requirements by 1997. CBLAB did not initiate legal or administrative action against localities for failing to meet the Phase I deadlines; instead, the board focused on working with them until their local programs were in compliance.

Figure 6
Number of Localities Achieving Initial Consistency
with Bay Act and CBLAB Regulations,
by Year and Phase



Notes:

All 84 Tidewater localities developed local programs that were fully consistent with the Phase I program requirements by 2002.

As of September 16, 2002, CBLAB determined that 69 localities had developed Bay Act programs that were fully consistent with the Phase II program requirements. CBLAB also determined that 12 localities had programs that were "consistent with conditions" while one locality's program was inconsistent with the program's requirements. In addition, CBLAB established "deadlines" for two localities to submit their programs to the board for the Phase II consistency review.

Phase III implementation has been postponed since CBLAB adopted new regulations on December 10, 2001. All localities must revise their local programs by March 1, 2003 to comply with the new regulations.

Source: JLARC staff analysis of CBLAD local program history data, September 16, 2002.

Completion of Phase II has also been slow, due to similar reasons: staff turnover, lengthy public reviews of local comprehensive plan amendments, and local resistance to the program. For example, CBLAD staff reported local leadership could influence how aggressively localities implement and enforce their Bay Act programs. In particular, a CBLAB staff member reported that the Middlesex County Board of Supervisors resisted adopting a comprehensive plan containing water quality measures as required under Phase II because they felt the State overstepped its authority by requiring the county to include these measures in its plan. Despite such delays, 80 out of 84 localities currently have comprehensive plans that are either "consistent" or "consistent with conditions" with the Phase II program requirements. In addition, CBLAD staff reported that Phase III implementation has been postponed because the board adopted new regulations in December 2001. All localities must amend their programs to comply with the new requirements before proceeding to Phase III.

While all localities have achieved Phase I compliance, and most are Phase II compliant, CBLAD staff emphasized that "consistency reviews" will be an ongoing process occurring whenever localities update their Bay Act programs. For example, §15.2-2230 of the *Code of Virginia* requires local governments to review and amend their comprehensive plans every five years if needed. Consequently, localities may have to periodically resubmit their plans to CBLAB for Phase II consistency reviews.

Lack of Resources Appears to Have Hindered Past and Planned Local Program Development in Some Localities

HJR 622 directed JLARC staff to assess the adequacy of "the current resources, both personnel and financial, necessary for...local implementation and enforcement of the Act." In light of this, JLARC staff conducted interviews with staff from 14 localities and analyzed survey data from 52 localities concerning the adequacy of State personnel and financial support.

JLARC staff found that several localities believe their programs have had inadequate resources to meet the requirements of the Bay Act program. For example, staff from 11 of the 14 localities interviewed during this study indicated that their programs lacked adequate funding, staffing, or both (Table 3). The localities argued that the State should provide them with sustained funding if it expects them to implement and enforce the Bay Act.

Staffing Resources. Table 3 shows that a majority of interviewed localities felt their jurisdictions lacked sufficient staff to effectively administer and enforce their programs. For example, staff from Chesapeake City, Lancaster County, and Gloucester County reported their programs lacked sufficient personnel. Furthermore, Virginia Beach, one of three localities with a special citizen-level board to oversee its Bay Act program, has no staff assigned full-time to administer its program. Virginia Beach's Bay Board is assisted by three employees who are also as-

Table 3
**Locality Assessment of the Adequacy of
Bay Act Program Staffing and Funding Resources**

Locality	Does Locality's Bay Act Program Have Adequate Staffing and Funding Resources		
	Yes	No	Program Deficiency Reported
Alexandria City		✓	Staffing and Funding
Chesapeake City		✓	Staffing and Funding
Fairfax County	✓		
Gloucester County		✓	Staffing
Henrico County	✓		
James City County		✓	Staffing
Lancaster County		✓	Staffing
Mathews County		✓	Funding
Norfolk City		✓	Staffing and Funding
Poquoson City		✓	Staffing and Funding
Prince George County		✓	Staffing
Richmond City	✓		
Spotsylvania County		✓	Staffing
Virginia Beach City		✓	Staffing and Funding
Total	3	11	NA

Note: Staffing and funding resources are predominately local, although some State local assistance grants were provided in three of these localities at the time of the JLARC review.

Source: JLARC staff analysis of survey and interview data from the 14 local government Bay Act program staff who were interviewed during the site visits, Spring and Summer, 2002.

signed as staff to other city programs such as the city's wetlands board. According to a Virginia Beach staff member, important Bay Act issues "fall through the cracks" occasionally because the city lacks adequate staff to administer its program.

JLARC staff analyzed data from the 52 localities responding to the survey to gauge their perceptions on whether their programs are appropriately staffed. As illustrated in Table 4, a majority of the surveyed localities reported they do not have enough staff to administer and enforce their Bay Act programs. In fact, all interviewed localities reported that due to limited staff they must mainly rely on private citizens to report Bay Act violations. For example, 34 localities responding to the survey indicated that they do not have staff specifically assigned to detect Bay Act violations. The data collected through both the survey and interviews suggests a majority of local programs are not operating optimally due to limited staff.

Table 4		
Locality Assessments of the Adequacy of Staffing to Implement the Bay Act		
Is the locality appropriately staffed to administer the Bay Act? (n=50)		
	<u>Yes</u>	<u>No</u>
City	8	8
County	8	13
Town	6	7
Total	22	28
Does the locality have staff specifically to observe and detect Bay Act violations? (n=49)		
	<u>Yes</u>	<u>No</u>
City	6	10
County	4	17
Town	5	7
Total	15	34
Source: JLARC staff survey of 84 Tidewater localities.		

Localities also stated on the survey that some Bay Act program functions were not being performed due to insufficient staff. For example, Isle of Wight County, Richmond County, and Chesapeake City staff reported that:

[Continued] program development is not possible [because the county lacks] field staff [and other resources] for regularly inspecting properties and developments for violations, developing educational materials and programs at the local level, working more closely with the farm and forestry communities, etc...

* * *

We are not able to meet on-site with applicants prior to the beginning of land disturbance activities and/or construction. If we were able to, many problems/violations could be prevented. Documentation of development waivers for construction in the landward 50 [feet] of the RPA is not as thorough as it should be.

* * *

On-site RPA delineations, CBPA violation investigations, CBPA enforcement, mapping, record keeping, technical assistance to the public, public education and violation follow-up could all be provided efficiently if staffing was appropriate...

One approach that could be adopted to address the limited staff issue is for the State to create "regional" Bay Act staff positions at the Tidewater planning district commissions (PDCs). These individuals would provide administrative and enforcement services to the localities that are members of their respective PDCs. JLARC staff found that this structure has already been established in one PDC. Specifically, the Northern Neck PDC employs two regional "environmental wetlands inspectors" that serve the PDC's four member localities. The Lancaster County Planning Director reported that the regional PDC inspector has assisted his locality by identifying Bay Act violations while conducting wetlands inspections.

Recommendation (1). The Chesapeake Bay Local Assistance Department and the Tidewater Planning District Commissions should explore the feasibility of creating Bay Act program staff positions at the PDCs. The regional Bay Act program staff would provide administrative and enforcement services to localities that are members of their respective PDCs.

Funding Issues. While staff from eight of the 14 localities interviewed indicated their programs were adequately funded (this funding is predominately local), several of these localities expressed concerns about the impact that the new regulations will have on their programs. For example, a Fairfax County staff person said that even though the county's Bay Act program is adequately funded to meet current requirements, Fairfax will likely need additional funding to hire more staff to comply with the new board regulations. The staff person was concerned that the county may not allocate additional funding for extra personnel due to current budgetary constraints.

The other six interviewed localities reported their Bay Act programs did not receive adequate funding. These localities said their programs were primarily financed through local general funds. Since their jurisdictions are experiencing budget shortfalls due to economic conditions, environmental concerns may be less of a funding priority. For example, an Alexandria City staff member said that even though the city supported the Bay Act, it was also concerned about attracting economic development to increase its tax base. The staff member felt the city might prefer increasing its tax base if forced to choose between environmental regulation and economic development.

Local staff interviewed during the study claimed that a lack of adequate State financial assistance impaired their compliance with the Bay Act. They argued that the State should provide them with sustained funding to hire administrative and enforcement personnel. Data collected during this review suggests that even prior to the recent State elimination of local assistance grants, State funding was relatively minor when compared to the reported local allocations. For example, localities responding to the survey indicated that in FY 2001 they allocated on average about \$124,000 to fund their Bay Act programs, while the State provided them with

an average of about \$14,400 in financial assistance (Table 5). (This latter amount includes localities that indicated they received no financial assistance from CBLAD in that year.) CBLAD staff indicated that the department's FY 2001 awards amounted to \$445,818 distributed among 19 localities and two planning district commissions. The average award amount to these 19 localities was \$25,043.

Table 5		
Average Local and CBLAD Grant Allocations FY 2001		
<u>Funding Source</u>	<u>All Responding Localities</u>	<u>Only Localities Receiving State Grants</u>
Average Locality Generated Funds	\$ 124,263 (n=19)	\$ 99,053 (n=8)
Average Amount of CBLAD Local Assistance Grants Received	\$ 14,439 (n=22)	\$ 31,765 (n=10)
<p>Note: CBLAD staff indicated that the department's FY 2001 awards amounted to \$445,818 distributed among 19 localities. (The remainder went to two planning district commissions.) The average award amount to these 19 localities was \$25,043.</p>		
<p>Source: JLARC staff analysis of responses to survey of 84 Tidewater localities and information provided by CBLAD.</p>		

Phase III Implementation Has Been Postponed

Program implementation has been further delayed through the postponement of Phase III, which occurred because the board adopted new regulations in December 2001. All Tidewater localities have until March 1, 2003 to amend their programs to comply with the revised regulations. The revised regulations call for CBLAD to evaluate all 84 Tidewater local programs to determine how well they are being implemented, administered, and enforced. Once CBLAD completes its review, the localities will begin Phase III implementation. According to CBLAD staff, Phase III implementation may begin in 2005, but the board has not established a definite time frame for this phase to occur.

THE OVERALL RECORD OF LOCAL PROGRAM ENFORCEMENT IS MIXED

The study mandate required JLARC staff to review the effectiveness of the "local implementation and local enforcement of the practices adopted to comply with the Act." In addition, HJR 622 directed JLARC staff to review the approval of deviations from the local programs by those jurisdictions. In order to address these elements of the study mandate, JLARC staff conducted file reviews and structured interviews in a subset of Tidewater localities. The study team also surveyed all 84

localities regarding their application of two on-going functions required by the performance criteria.

In order to evaluate the effectiveness of the local Bay Act programs as required by the study mandate, JLARC staff reviewed the issue of permitted encroachments into the Resource Protection Areas. CBLAB regulations adopted in October 1991 strictly limit development activities from encroaching into the RPAs due to the important function they perform in filtering nonpoint source pollution runoff. In particular, the regulations restrict RPA development to water dependent uses and the redevelopment of already developed areas. The regulations also restrict development activities by only allowing projects on pre-Bay Act building lots to encroach into the landward 50-foot portion of the RPA and into the seaward 50-foot portion under circumstances established in the regulations. However, enforcement of this provision has proven controversial because it limits the amount and type of development that can occur along the Bay's shorelines. The file reviews indicated that the rigor with which the program is enforced varies among those reviewed.

JLARC staff surveyed localities to determine if they used the "best management practices (BMP) maintenance agreement" and the "five year septic tank pump-out" performance criteria as required by CBLAB regulations. Staff selected the BMP maintenance agreement criterion because CBLAD considers properly functioning BMPs to be vital to reducing nonpoint source pollution runoff. The septic tank pump-out criterion was selected because the regulations require septic systems to be emptied periodically to prevent sewage from overflowing and contaminating water supplies, which represents a public health issue. Based on the data collected through the survey, it appears that most localities properly enforce these performance criteria, but some localities do not. Thus CBLAB's intent to reduce nonpoint source pollution through the application of these measures may be hampered by localities that do not enforce them.

Approval Practices for RPA Encroachments by Some Localities Does Not Appear Consistent with the Intent of the Bay Act

To comply with HJR 622's requirement to conduct a "review of the frequency, consistency, and rationale for local exceptions, variances, or similar decisions," JLARC staff reviewed more than 300 files related to RPA encroachment activities in 11 Tidewater localities. This file review indicated that localities maintain different amounts of information related to RPA encroachments and allow development to occur in these areas that is inconsistent with the intent of the Bay Act. (Since JLARC staff limited its review to FY 2000 and FY 2001, staff used CBLAB's October 1, 1991 regulations in effect during this time to evaluate local enforcement activities.)

Local RPA Encroachment Record Keeping Practices. To comply with HJR 622's directive to assess the frequency and rationale for local exceptions, JLARC staff reviewed a random sample of 323 RPA encroachment applications received in FY 2000 and FY 2001 at 11 local governments. Since CBLAB implemented revised regulations on March 1, 2002, JLARC staff used the board's "old" regulations

that were effective on October 1, 1991 to evaluate local RPA encroachment activities, as these regulations were in effect at the time the applications were processed.

JLARC staff intended to review both “approved” and “denied” RPA encroachment applications. However, because there is no requirement governing what information localities must keep regarding the Bay Act, the variation in local record keeping practices hindered these efforts. For example, localities such as Virginia Beach maintain detailed records on all approved and denied encroachment applications, while localities such as Lancaster County only maintain records on approved RPA encroachment projects. In fact, several localities that JLARC staff visited do not maintain records on denied applications. Thus, a substantial number of denied RPA encroachment applications were not available for JLARC staff to review. In addition, not all localities in which files were reviewed maintained information concerning when a lot or land parcel was recorded, and as a result JLARC staff were unable to categorize all the files as either pre- or post-Bay Act.

Frequency of RPA Encroachments. The data contained in Table 6 indicate (based on the information available for JLARC staff to review) that localities approved many RPA encroachment applications received during FY 2000 and FY 2001. JLARC staff found during the file reviews that the localities approved RPA encroachments on both “pre-Bay Act” and “post-Bay Act” building lots and authorized development to occur in the 50-foot seaward portion of the 100-foot RPA buffer. Specifically, JLARC staff’s file review activities indicate that localities permitted encroachments in 314 cases and allowed 96 “non-exempt” projects to encroach into the 50-foot seaward portion of the RPA buffer. Based on these results, some localities are allowing RPA encroachments to occur that are not consistent with CBLAB regulations. Specifically, section 9 VAC 10-20-130(B)(2) of the board’s regulations stated:

When the application of the buffer area would result in the loss of a buildable area on a lot or parcel recorded prior to October 1, 1989, modifications to the width of the buffer area may be allowed...with the following [stipulation]...in no case shall the reduced buffer area be less than 50-feet in width.

The team also collected data on the type of RPA development projects approved by the localities. Table 7 demonstrates that the localities approved development in RPAs primarily for single-family homes and accessory structures such as decks, pools, sheds, and garages during FY 2000 and FY 2001.

Degree of Local RPA Enforcement Varies in Localities Visited by JLARC Staff. JLARC staff found during the file review that the degree of RPA enforcement varied by locality. Local interpretations of the RPA buffer requirement ranged from a fairly strict policy where few encroachments are allowed unless hardships are demonstrated to a more generous policy where encroachments appeared to be regularly allowed into the buffer. However, there did not appear to be a single explanation as to the differing policies.

Table 6				
Local RPA Encroachment Activity During FY 2000 and FY 2001				
Locality	Total RPA Encroachment Applications Reviewed	Total Encroachment Applications Approved ¹	Seaward 50 Feet of the RPA Approvals Only	
			Non-Exempt Applications Approved ²	Non-Exempt Applications Approved, as Percent of Total Applications
Alexandria	6	6	4	67 %
Virginia Beach	55	50	37	67 %
Chesapeake	75	75	35	47 %
Gloucester	34	31	7	21 %
Richmond City	12	12	2	17 %
James City	43	43	7	16 %
Henrico	14	14	1	7 %
Lancaster	50	50	2	4 %
Fairfax	24	23	1	4 %
Spotsylvania	6	6	0	0 %
Prince George	4	4	0	0 %
Total	323	314	96	30 %

¹This column contains the total number of RPA encroachments approved by the localities as either administrative waivers, exceptions, or exemptions. Specifically, the localities issued 182 administrative waivers, 97 exceptions, and 23 exemptions. Land disturbing activities such as the construction, installation, and maintenance of public utilities, railroads, and public roads are considered to be "exempt" from the requirements of the Bay Act and board regulations. In addition, Richmond City staff reported that the City does not issue property owners administrative waivers or exceptions to encroach into the RPA Buffer. Instead, the City allows property owners to encroach as long as their projects comply with the city's Bay Act program regulations. JLARC staff found that the City allowed 12 projects that complied with its program to encroach into the RPA.

²This column shows the number of non-exempt projects that the localities allowed to encroach into the 50-foot seaward component of the RPA buffer.

Notes: Some localities maintain detailed records indicating that RPA encroachments were granted for pre-Bay Act or post-Bay Act building lots, but most localities do not maintain this information as part of their files related to encroachments.

During the file review, JLARC staff reviewed nine "denied" RPA applications that were maintained by Fairfax County, Gloucester County, and the City of Virginia Beach. Most localities do not maintain information on denied applications.

Source: JLARC staff analysis of file reviews at 11 Tidewater cities and counties.

Henrico County is an example of a locality that follows a "strict" RPA buffer policy. According to Henrico County staff, the county protects its RPA buffer by requiring a mandatory 30 to 50-foot setback (depending on the zoning classification) "between the buildable area on a residential lot" and the buffer allowing homeowners to have adequate rearyard space which helps eliminate the need to encroach. Henrico also requires developers to post signs along the RPA boundaries designating

Table 7	
Local RPA Development Applications Approved (FY 2000 and FY 2001)	
<u>Type of Building Permits</u>	<u>Frequency</u>
Single Family Development	185
Subdivision	16
Accessory	60
Industrial/Commercial	16
Other*	37
Total	314

*"Other" includes activities such as landscaping, stream bank erosion protection, tree removal, and septic tank installation.

Source: JLARC staff file analysis of Bay Act program files at 11 Tidewater cities and counties.

them as environmentally sensitive areas. Henrico staff reported that they authorized very few "exceptions" for property owners to encroach into the RPA buffers because the county requires applicants to demonstrate "significant" hardships before granting encroachment rights. Henrico staff also said the nature of the county's geography precludes citizens from requesting RPA encroachments, for the most part, because there are no real scenic vistas along its preservation areas.

JLARC staff confirmed that Henrico County does not grant RPA encroachments unless property owners demonstrate significant hardships. The study team reviewed a proposal that Henrico received in February 2001 requesting that a "landfill" operation expand into the RPA buffer. The county responded to the applicant by stating:

...it is the intent of the Chesapeake Bay Act to protect the water quality of streams and wetlands by maintaining a 100 [foot] vegetated buffer along tributary streams. I can not imagine an instance whereby a 100-foot buffer could be more useful or beneficial than at a landfill operation. In addition, your proposal to include a 2 to 1 landfill slope as part of the buffer is particularly troublesome and is unacceptable. It is my opinion that you have not demonstrated a hardship, which allows for the encroachment into a much needed buffer.

The study team also identified other localities adhering to a fairly strict interpretation of the RPA buffer requirement. Lancaster County only allows RPA encroachments on pre-Bay Act lots if there is not enough space available to accommodate structures outside the buffer. This policy is consistent with CBLAB regulations. Despite this, Lancaster staff also reported that the county will occasionally grant pre-Bay Act lot owners' requests to encroach into the seaward 50-foot portion of the RPA buffer for attached additions to pre-Bay Act single family residences if the board of supervisors approves the projects.

JLARC staff found instances where localities regularly grant encroachments into RPA buffers. Chesapeake and Virginia Beach approved a substantial number of RPA encroachments during FY 2000 and FY 2001. It was observed that they also granted permission for development to occur in the seaward 50-foot portion of the RPA buffer:

While reviewing 75 randomly selected files from the City of Chesapeake, JLARC staff observed that the city approved 35 applications for development to occur in the 50-foot seaward portion of the RPA buffer for activities such as clearing existing indigenous vegetation to establish a lawn, sunroom additions, decks, gazebos, single-family homes, sheds, and swimming pools. Furthermore, the city appeared to approve all requests for encroachment into the RPA buffer. Chesapeake City staff said the RPA encroachments were justified because the building lots were recorded prior to the adoption of the city's Bay Act program. The city felt that denying property owners the right to develop their property would place undue hardships on them and as a result, they allowed owners to encroach into the seaward portion of the buffer.

However, CBLAD's former director told JLARC staff that Chesapeake recently restructured its program to be more in-line with the intent of the Bay Act. In fact, Chesapeake staff reported that the city is now enforcing the full 100-foot RPA buffer requirement.

JLARC staff reviewed a total of 55 RPA encroachment applications in the City of Virginia Beach: 50 applications were approved, 43 approvals were for pre-Bay Act lot development, and 37 projects were allowed to encroach into the 50-foot seaward portion of the buffer. The file review revealed that Virginia Beach granted its buffer encroachments for the development of single-family homes, garages, pools, driveways and an automotive shop. Virginia Beach staff and a Bay Board member said the city allows building activities on pre-Bay Act lots and on lots that are too small to accommodate structures outside the buffer to encroach into the RPA. A Bay Board member reported the city does not have the right to deny property owners the ability to develop their property and thus will not deny development in the seaward portion of the buffer. Staff argued that the city protects more land than most localities do because it requires a larger RPA buffer than other localities, which they believe should allow them more leeway in reviewing applications.

Nonetheless, CBLAB regulations in effect at the time (and also now) required that "in no case shall the reduced portion of the buffer area be less than 50 feet in width" for pre-Bay Act lots. CBLAD's acting director reported that Virginia Beach allows "improper" development to occur in its RPA buffer, which sets a bad precedent for other Tidewater localities. CBLAB has refrained from taking legal action against the city because it is an expensive, time-consuming process that was not advocated

by past administrations. The CBLAD director also said the program is designed to be a "partnership" where the State and localities work out their differences.

JLARC staff observed one locality that was poorly organized to administer its Bay Act program. Prince George County's RPA record keeping was disorganized, resulting in JLARC staff only being able to review four encroachment applications for FY 2000 and FY 2001. County staff seemed ill informed about RPA development activity, since the county did not keep good records, and only initiated a plan review process in 2000. Prior to that, Prince George staff reported that the county's development review process "appeared to be one of mass confusion" with no structure for analyzing plans for compliance with the Bay Act and board regulations. However, section 9 VAC 10-20-60 of CBLAB regulations requires localities to implement a plan review process to ensure that development complies with the Bay Act and board regulations.

Prince George staff also reported that county leadership resisted the Bay Act. In late 1999, CBLAB had to threaten to initiate legal action against the county to force it to adopt a comprehensive plan consistent with the Bay Act and board regulations. The county complied with CBLAD's request in March 2000. Moreover, JLARC staff reviewed an instance where Prince George County initially refused to enforce its Bay Act program:

In April 2002, CBLAD received a report from the Army Corps of Engineers that a "gated community" along the James River in Prince George County cleared more than three acres of wetlands, which violated the Bay Act. County staff reported to CBLAD that they issued the community a violation notice, but the acting county administrator declined to support his staff's efforts to enforce the Bay Act. The county administrator informed staff that it was CBLAD's responsibility, not the county's, to intervene in these matters.

The county's position directly contradicts the Bay Act. Specifically, §10.1-2108 of the *Code of Virginia* states localities "are authorized to exercise their police and zoning powers to protect the quality of State waters consistent with the provisions of the [the Bay Act]."

Recommendation (2). The Chesapeake Bay Local Assistance Board and Department should ensure through the compliance review process that the Tidewater localities enforce the 100-foot Resource Protection Area buffer requirement as established in the Chesapeake Bay Preservation Area Designation and Management Regulations.

Enforcement of Certain Performance Criteria Has Been Uneven

According to Chesapeake Bay Local Assistance Department staff, localities enforce their Bay Act programs through land use ordinances containing Chesapeake Bay Local Assistance Board performance criteria. Results of the JLARC staff survey of the Tidewater cities, counties, and towns found that local application of the BMP

maintenance agreement and septic tank pump-out performance criteria is not consistent across all localities. According to CBLAD staff, the localities that fail to use the board's performance criteria violate the Bay Act, CBLAB regulations, and local land use ordinances containing these measures.

Some Localities Do Not Require Best Management Practice (BMP) Maintenance Agreements. CBLAD's *A Guide to the Bay Act* states "the performance criteria work to reduce nonpoint source pollution...largely through the use of 'best management practices' or BMPs." The ability of BMPs to protect water quality is dependent upon "design, construction, and maintenance." Due to the important role that BMPs perform in reducing nonpoint source pollution, section 9 VAC 10-20-120(3) of the board regulations requires BMP maintenance to be "ensured by the local government through a maintenance agreement with the owner or developer...."

JLARC staff surveyed localities to determine if they enforced this performance criterion as required by CBLAB. As shown in Table 8, a majority of responding localities require BMP maintenance agreements, but 15 localities indicated on the survey that they do not. Thus, the board's effort to reduce nonpoint source pollution through this requirement may be hindered by localities that do not enforce it.

Due to the important function properly operating BMPs perform in reducing nonpoint source pollution, JLARC staff surveyed Tidewater localities to determine if they conducted periodic inspections of their BMPs to reduce increased nonpoint source runoff from RPA encroachments. As shown in Table 9, a majority of localities responding to the survey admitted that they do not inspect BMPs. JLARC staff also observed during its review of the RPA encroachment files that the 11 localities required BMPs to be installed in 191 out of the 314 approved applications. It appears that localities require BMPs to be installed to mitigate for increased runoff generated by RPA development, but do not inspect them to ensure proper maintenance and operation.

Table 8		
Local Use of Best Management Practice Maintenance Agreements		
Did the locality require a property owner to sign a Best Management Practice (BMP) maintenance agreement? (n=40)	<u>Yes</u>	<u>No</u>
City	10	2
County	12	4
Town	3	9
Total	25	15

Source: JLARC staff survey of 84 Tidewater Localities.

Did the locality periodically assess the effectiveness of BMPs? (n=44)	<u>Yes</u>	<u>No</u>
City	3	12
County	7	11
Town	4	7
Total	14	30

Source: JLARC staff survey of 84 Tidewater Localities.

Five-Year Septic Tank Pump-Out Requirement Is Not Being Addressed by Some Localities. Section 9 VAC 10-20-120(7) of the regulations requires localities to ensure that on-site sewage treatment systems are pumped-out at least once every five years. According to *A Guide to the Bay Act*, the purpose is to “prevent septic failure and ensure peak performance of septic systems [since] decreased performance results in increased pollution...” Failed septic systems represent a public health issue because they can introduce untreated sewage with harmful pathogens (E. coli bacteria, cryptosporidium, etc.) into surface and ground water supplies, which may cause gastrointestinal illnesses. In fact, the Virginia Cooperative Extension Service reported in 1996 that “malfunctioning septic systems are currently the leading cause of groundwater pollution in Virginia.”

JLARC staff contacted the Virginia Department of Health (VDH) to collect data on the number of “failed” septic systems in the 84 Tidewater localities. However, VDH staff reported that the department does not maintain such data. VDH staff said septic systems will last about 20 years (depending on how well they are maintained) before failing. There are about 900,000 septic systems in Virginia and all will eventually fail and need to be replaced.

Analysis of survey data by JLARC staff revealed that a majority of localities require septic tank systems to be pumped out every five years (Table 10). However, 15 of the 40 responding localities reported they do not require property owners to periodically pump out their septic systems. Reasons given vary: Richmond County reported it lacks staff and funding to develop a data base to monitor the pump-out requirement and the cities of Williamsburg and Alexandria do not enforce it because their entire jurisdictions are connected to public sewer systems.

To assist localities with this requirement, CBLAD provided them with computer software packages in the early 1990s to monitor the maintenance of residential septic systems. CBLAD also provided a “model” septic system ordinance that

Table 10		
Five-Year Septic Tank Pump-Out Requirement		
Did the locality require pump-out of on-site sewage treatment systems at least once every five years? (n=40)	<u>Yes</u>	<u>No</u>
City	7	5
County	12	4
Town	6	6
Total	25	15
<p>Note: Some localities do not enforce the septic tank pump-out requirement because they are connected to public sewer systems. However, JLARC staff were unable to identify the actual number of Tidewater localities that have public sewer systems.</p>		
<p>Source: JLARC staff survey of 84 Tidewater Localities.</p>		

local governments could adopt to enforce the requirement, and the board authorized them to contract with local health departments to monitor septic system maintenance. However, CBLAD has not audited the localities' administration of this requirement, and as a result, some jurisdictions have not required periodic maintenance of residential septic systems.

CBLAD staff reported that local implementation of the requirement has not been successful, and the department has not pushed the issue because many localities lack adequate enforcement resources. Nonetheless, this is a required activity under the adopted program regulations. Despite the health risks involved with dysfunctional septic systems, localities may interpret CBLAD's reluctance to address this issue as an opportunity to ignore it.

Recommendation (3). Through the compliance review process, the Chesapeake Bay Local Assistance Department should ensure that the Tidewater localities are enforcing BMPs to mitigate for RPA encroachments that are based on signed maintenance agreements. CBLAD should also require localities to periodically inspect BMPs to ensure property owners maintain them. In addition, Tidewater localities, CBLAD, and the Virginia Department of Health should jointly develop a process to ensure that residential septic systems are identified and periodically maintained in accordance with board regulations.

LOCAL VIEWS TOWARD BAY ACT PROGRAM AND REVISED CBLAB REGULATIONS

During the course of this study, JLARC staff found that many localities appear to support the Bay Act program and believe it has been effective in reducing nonpoint source pollution in the Chesapeake Bay. However, JLARC staff found that localities were concerned about the impact that the 2002 General Assembly's decision to eliminate funding for CBLAD's local financial assistance program will have on their programs. In particular, some localities indicated that they may eliminate staff and educational outreach programs as a result of the General Assembly's decision.

JLARC staff also found that several localities were concerned about the impact that CBLAB's revised regulations will have on their programs. The revised regulations require local governments to conduct public hearings on all RPA exception requests, conduct on-site RPA delineations, and undergo periodic "compliance evaluations" to ensure that localities are properly administering and enforcing their programs. The localities claimed they need additional funding to hire staff to comply with the new program requirements. They also said the compliance evaluation process will be time consuming and may divert limited resources away from their Bay Act programs. However, a majority of localities responding to the survey believe the new regulations will be beneficial to the Bay Act program.

Local Government Survey Indicates That Most Localities Appear to Support the Bay Act

As shown in Table 11, a majority of localities responding to the survey believe the Bay Act represents a proper balance between State regulations and private property rights. This data also shows that most jurisdictions believe the Bay Act has been effective in limiting nonpoint source pollution in the Chesapeake Bay. The results of the survey indicate that while there are some Tidewater localities that appear to resist the Bay Act, most view it in a positive light.

However, JLARC staff observed that several localities supportive of the Bay Act felt the program has some deficiencies that should be addressed. For example, staff from Fairfax County and Spotsylvania County reported:

Where applied consistently and completely (e.g. where a locality has established a jurisdiction-wide Chesapeake Bay Preservation Area), it is our view that the Bay Act has been effective in limiting pollution in its tributaries. However, [CBLAB regulations] do not require jurisdiction-wide designations, and therefore there may be areas within the Bay Act localities where pollutant runoff from agricultural uses and/or new development is not "limited." Further, and more significantly, most of the area within Virginia's portion of the Chesapeake Bay watershed does not come under the jurisdiction of the Chesapeake Bay Preservation Act; the Act is, therefore, ineffective in meeting Bay Program goals in this area.

Table 11		
Localities' View Toward The Bay Act		
How does the locality view the Bay Act? (n=49)	Proper balance between State regulations and private <u>property rights</u>	Too much emphasis on State regulation <u>of land use</u>
City	8	8
County	13	7
Town	8	5
Total	29	20
Has the Bay Act been effective in limiting pollution? (n=51)	<u>Yes</u>	<u>No</u>
City	10	6
County	14	7
Town	11	3
Total	35	16

Source: JLARC staff survey of 84 Tidewater localities.

* * *

The Act has been effective in getting the development and local government communities to recognize the importance of stream-side buffers and stormwater management. The Act, however, has not been effective in controlling agricultural runoff, the largest contributor of sediment into the Bay.

JLARC staff also observed that local attitudes toward the Bay Act can influence how promptly localities comply with the Act and how aggressively they enforce their programs. CBLAD staff said localities viewing the Bay Act as burdensome resist contacting the department for guidance and delay preparing programs until their deadline is near. This caused those localities to experience delays in achieving full program consistency.

The Isle of Wight County Planning Director also reported that local officials' views toward environmental regulation can influence how aggressively localities enforce their Bay Act programs. For example:

Prior to January 2000, Isle of Wight County followed a "liberal" interpretation of the Bay Act and board regulations. The Board of Supervisors directed that the county adhere to a policy that allowed for the automatic reduction of the 100-foot RPA buffer on all building lots recorded before and after 1989 if the developers promised to install BMPs to mitigate for the encroachments. However, in January 2000, new board members were elected and the county began to enforce a strict 100-foot RPA buffer protection policy. In fact, county staff reported that the new board of supervisors aggressively enforces the Bay Act and no longer even allows staff to grant administrative waivers for developers to encroach into the 50-foot landward portion of the RPA on pre-Bay Act lots. All proposed RPA encroachments, including minor structures such as sheds, must be reviewed and approved by the board of supervisors in a public meeting.

In addition, the Spotsylvania County Bay Act program coordinator reported that the board of supervisors directed staff to allow property owners to automatically encroach into the RPA if they promised to construct BMPs.

Impact of 2002 General Assembly's Elimination of Funding for Local Assistance Grants

Several localities expressed concerns to JLARC staff about the impact that the 2002 General Assembly's decision to eliminate CBLAD's local financial assistance program will have on them. The localities argued that this action might prevent them from effectively administering their Bay Act programs because they will not receive any additional State funding. In response to the JLARC staff survey, six out of eleven localities indicated they may have to increase their local Bay Act program allocations, three out of ten indicated they would eliminate Bay Act program staff, and seven out of eleven indicated they would eliminate outreach programs.

Local Concerns About Impact of New CBLAB Regulations

CBLAB adopted revised regulations in December 2001 and established dates by which time localities must adopt specific sections of the new regulations (Exhibit 6). CBLAB's primary objective in revising its regulations was to "clarify" the RPA 100-foot buffer requirement. The board felt this was needed because some localities misapplied the 100-foot RPA buffer provision by allowing all property owners and developers to encroach into the buffer. Additional significant changes in CBLAB's regulations include the requirement that RPA exception requests be examined by public review boards and that RPA and perennial stream determinations be made on-site by local staff.

The revised regulations also require localities to undergo a "compliance evaluation review" every five years to ensure that their programs are properly administered and enforced. As part of this review, they must collect statistical data on items such as the number of RPA exceptions granted, number of water quality im-

Exhibit 6

Significant Changes to CBLAB Regulations and Implementation Chronology

Items that require immediate implementation: Localities must remove the provision from their ordinances allowing encroachment into the landward 50-foot portion of the RPA and begin enforcing the full 100-foot RPA buffer requirement as of March 1, 2002.

Items that must be adopted by March 1, 2003:

- Perennial flow basis for determining the RPA buffer associated with water bodies,
- RPA buffer preservation and protection;
- Site specific RPA delineation requirement;
- Stormwater Management performance criteria;
- Agriculture performance criteria and with aspects of agriculture management plans, standards, references, and enforcement;
- Clarifications regarding non-conforming structures and lots and exemptions; and
- Exception review and approval process.

Items that may be adopted:

- Septic system inspections and alternatives;
- Some components of the stormwater performance criteria;
- Local program practices in Intensely Developed Areas (IDAs) where appropriate;
- Accommodation of regional BMPs in the RPA;
- Some components of the Agricultural management plans;
- The additional grandfather period, from October 1989 to the effective date of the current changes; and,
- Civil penalties.

Changes to the Regulations that do not require local action at this time: There are items that should be addressed by localities concurrently with the new amendments, but they do not need to be addressed until CBLAD provides further guidance. These items include those that will be necessary for Phase III consistency and to accommodate changes pertaining to comprehensive plans.

Additional Future Requirements: Localities must submit annual reports to CBLAD "on their program administration and implementation efforts." In addition, localities must undergo "compliance evaluations" every five years to ensure that localities are administering their programs in accordance with the Bay Act and CBLAB regulations.

Source: CBLAD's *Program Description For Locality Compliance With Revised Regulations* and JLARC staff review of CBLAB regulations.

pact assessments (WQIA) reviewed, and civil fines collected from Bay Act violators. CBLAD staff will also review the local governments' CBPA maps, land use ordinances, and comprehensive plans to ensure they are current and being used appropriately. In addition, localities will have to submit "annual reports" to the board outlining the implementation of their local programs. However, CBLAD has not yet developed guidelines for the localities to use for preparing their annual reports.

Localities interviewed by the study team reported that there are some "obstacles" present that may impact their ability to comply with the new CBLAB regulations within the allotted time. Localities such as Mathews County, Fairfax County, James City County, and Gloucester County expressed concerns about adequate financial support to comply with the new requirements. They claimed that additional funding is needed for more personnel to staff the public review process, conduct RPA site delineations, and revise local programs to reflect required changes. For example, Chesapeake City staff reported:

As a result of the new CBPA regulations...on-site [perennial stream] determinations, on-site RPA determinations, CBPA map revisions and ordinance and comprehensive plan updates will be required. These new regulations will require a different prioritization of CBPA functions and staff time. With the City of Chesapeake's tight budget constraints, additional funds for this additional work cannot be provided. The City will not be able to dedicate any additional resources to administering the [Bay Act] regulations. As a result, staff time will have to be re-allocated...the new regulations may result in reduction of staff resources allocated to the review and inspection of BMP facilities.

The City of Chesapeake has major concerns over the lack of funding involved with the amount of staff required to implement the new regulations...The City would like to express our concerns over this lack of funding and the fact that the regulations must be adopted, which will require much more extensive staff time. This is an unfunded mandate, and with the City's budget constraints, we are concerned about how to achieve these new standards.

Several localities expressed concerns about how the new compliance evaluation requirement will impact them. These localities claimed they do not monitor RPA encroachments and do not have enough staff to collect the statistical information that CBLAD intends to review. They said the compliance evaluation was a "data intensive" process requiring their jurisdictions to allocate additional resources that will prevent them from administering their Bay Act programs. For example, Hampton City, Henrico County, and Hanover County reported that:

The proposal will require significant additional local resources to implement. This requirement is coming at a time when State funding assistance to local governments has been eliminated.

* * *

Although much of the data requested in the draft Procedure has been requested of recipients of previous competitive grants from CBLAD, other localities have neither been required to track nor report the requested information...Reporting the requested information by "back-tracking through files and archived records will be time consuming and burdensome and will probably not be complete."

* * *

In particular, we feel the proposed process places unnecessary and additional unfunded mandates on local governments. These mandates include additional staff time to coordinate and participate in interviews, responding to time consuming inquiries and significant data tracking...We estimate that this would require the dedication of a full-time staff position to establish this record keeping and further would require continued depletion of our engineering resources to maintain the data.

Despite these concerns, a majority of the surveyed local governments believe the compliance evaluation will be beneficial because CBLAD will finally review the localities to ensure that they are consistently administering their Bay Act programs (Table 12).

Table 12			
Local View Toward Compliance Evaluation			
The Compliance review program established under the new board regulations will be beneficial to this locality. (n=51)	<u>Agree</u>	<u>Disagree</u>	<u>Not Applicable</u>
City	9	7	0
County	17	4	0
Town	12	1	1
Total	38	12	1

Source: JLARC staff survey of 84 Tidewater localities.

III. State Administration of the Bay Act

Since its inception, CBLAD has primarily focused on working with local governments to adopt water quality protection measures into their comprehensive plans and land use ordinances as required by the *Code of Virginia*. Agency staff achieve this through the provision of both technical and financial assistance to the Tidewater localities. The Bay Act also requires that local programs be consistent with its provisions and the board regulations. As a result, staff have to make certain that the local programs properly address the Phase I and Phase II requirements of mapping Chesapeake Bay Preservation Areas (CBPAs) and including water quality performance criteria in local ordinances and comprehensive plans, respectively.

CBLAD staff appear to have provided adequate technical assistance to the localities. The *Code* requires the board and the department to provide assistance related to land use and development and water quality protections to the Tidewater localities and State agencies. CBLAD has implemented this responsibility by providing help with the broader issues of developing local comprehensive plans and ordinances, as well as assistance on specific erosion and sediment control and storm-water plans. Respondents to the JLARC staff survey overwhelmingly indicated that this assistance has been good.

Although CBLAD staff have ensured that almost all local programs are consistent with the Phase I and Phase II requirements, there has been little effort to evaluate, in a systematic manner, whether the local programs are properly administered once they have achieved this consistency. This review indicates that there are several reasons for this lack of effort, including the level of resources available to carry out this function, the length of time required to implement the board's revised regulations, and the priorities of the board. As part of the new regulations, CBLAD hopes to implement a compliance evaluation review program to assess local compliance this fall. However, five years have passed since the General Assembly amended the Bay Act to explicitly ensure that the board would address compliance.

The availability of resources has been a key factor impacting CBLAD's performance. Furthermore, CBLAD's ability to assist the local governments in preparing for the on-going compliance activities required by the new regulations was severely restricted when the 2002 General Assembly virtually eliminated the funding CBLAD used for its competitive grants program.

The State may wish to consider certain policy alternatives for the future. Potential options include: maintaining the Bay Act and the Chesapeake Bay Local Assistance Department in their current forms and with their current functions, consolidating CBLAD as a separate division within the Department of Conservation and Recreation (DCR), or creating a new agency focused on prevention of future Bay Act contamination rather than after-the-fact clean-up. There are some concerns that a consolidation of CBLAD with another agency would bring limited benefits that may not justify this major structural change. Regardless of what happens to the department, the core functions of providing assistance to local governments and

ensuring the provisions of the regulations are appropriately implemented should not be eliminated.

ACCORDING TO LOCALITIES, CBLAD'S PROVISION OF TECHNICAL ASSISTANCE HAS BEEN GOOD

The board's responsibilities regarding the Bay Act are established in the *Code of Virginia* and are two-fold: assistance and oversight. First, as discussed below, these responsibilities focus on assisting local governments, regional bodies, and State and federal agencies as their activities impact the provisions of the Bay Act. Local governments have been the principal recipients of this assistance through technical and financial support. CBLAD's other primary responsibility, which is addressed later in this chapter, focuses on assessing locality compliance with the Bay Act's provisions and the Board's regulations.

CBLAD Staff Provide Financial and Technical Assistance to Local Governments

Section 10.1-2103 of the *Code of Virginia* defines the board's powers and duties. A primary function of the board is to provide assistance, both financial and technical, to the Tidewater localities. Financial assistance is made available by the department principally through the use of competitive grants to local governments and funding positions in the soil and water conservation districts (SWCD) to write Bay Act farm plans. CBLAD staff spend a substantial portion of their time providing technical assistance to the localities, including answering questions about application of the performance criteria and assisting with site inspections. The *Code* also states that the board is to assist regional and state agencies concerning aspects of land use and development and water quality protection.

Financial Assistance. CBLAD administers three grants programs to provide local governments and regional governmental entities with financial assistance to develop programs that comply with the requirements of the Bay Act. These grant programs consist of: the Competitive Grants Program, the Agricultural Water Quality Grant Program, and the Technical Assistance Grant Program. (Funding for the department's financial assistance to localities was eliminated by the 2002 General Assembly for the FY 2002-2004 Biennium.)

The Competitive Grants Program has been CBLAD's major financial mechanism for facilitating the development of local Bay Act programs. As discussed in Chapter I, CBLAD has provided more than \$8.8 million to the local governments and Planning District Commissions (PDC) since FY 1991 through the program. In addition to funding these grants, CBLAD staff, particularly the locality liaisons, also assist the local governments in drafting grant requests.

The department also provides financial assistance to the Soil and Water Conservation Districts (SWCD) located in the Tidewater region. CBLAD funds positions in the SWCDs that are responsible for writing farm management plans addressing nutrient management and land conservation practices to protect groundwater and surface water from nonpoint sources. CBLAD also supplies a small amount

of funding to Tidewater localities for technical assistance purposes, such as computer equipment purchases, local staff development training, and educational materials.

Technical Assistance. To comply with statutory requirements, CBLAD staff provide a variety of technical support, that includes: reviews of plans of development as requested by the local governments, on-site inspections, and, training and workshops (Exhibit 7). Moreover, CBLAD staff in both the environmental engineering and environmental planning divisions review erosion and sediment control and stormwater management elements of site and subdivision plans for compliance with the requirements of the program. These reviews may result in a written response to the local government. According to CBLAD staff, the agency provides this assistance to localities on a daily basis.

A central element of CBLAD's technical assistance is its *Local Assistance Manual*. Developed in 1989, and last updated in 1993, the manual is described by CBLAD as a "how to" manual for local governments to use in preparing local Bay Act programs. It provides localities with guidance on designating Chesapeake Bay Preservation Areas, implementing and enforcing CBPA performance criteria, and developing comprehensive plans and land use ordinances that comply with the Bay Act and regulations. CBLAD is currently updating its *Local Assistance Manual* to reflect the regulatory changes that became effective as of March 2002. The board approved six guidance documents in September 2002 updating its policies to reflect policy changes in the revised regulations, including exceptions and the delineation of resource protection areas. The department has stated that it is currently in the process of updating other guidance as well.

Section 10.1-2103 of the *Code of Virginia* also requires CBLAD staff to review and comment upon State agency projects. In addition, CBLAD staff review State and federal projects for consistency with the State's authority in coastal areas through Virginia's Coastal Resources Management Program (VCRMP) as coordinated by the Department of Environmental Quality (DEQ). As part of this review process, VCRMP requires CBLAD and other State agencies to review the environmental impact assessments prepared in conjunction with projects initiated by Virginia and the federal government. Staff also serve on other inter-agency committees and groups.

CBLAD Should Continue to Offer Assistance and Training Opportunities

As indicated in Table 13, a substantial majority of survey respondents found the assistance of CBLAD staff helpful. For example, 84 percent of the 51 respondents either strongly agreed or agreed with the statement that assistance is appropriate. Likewise, 96 percent of the respondents agreed that CBLAD responds to their questions in a timely manner.

In addition to assisting localities individually, CBLAD has presented more than 25 workshops and training opportunities to larger groups in the Tidewater region between May 2000 and May 2002. Topics included the effects of regulatory changes on local programs, better site design, and the compliance review program.

Exhibit 7

CBLAD Local Assistance Activities

<u>Activity</u>	<u>Description</u>
Local Assistance Manual	CBLAD developed a local assistance manual to provide the Tidewater localities with information on developing their Bay Act programs. The manual contains information on identifying and mapping Chesapeake Bay Preservation Areas, implementing CBLAD's performance criteria, and guidelines for developing and implementing comprehensive plans that protect water quality.
Model Ordinance	CBLAD developed and distributed a model zoning ordinance to all Tidewater localities to assist them in developing land use ordinances that comply with State regulations and the Bay Act.
Mapping Package	CBLAD provided localities with a map package that contained National Wetlands Inventory data, U.S. Geological Survey 7.5 minute quadrangle data, Virginia Institute of Marine Science Tidal Wetlands Inventory data, and Geographic Information System (GIS) Soil Maps.
Hydrologic Unit Maps	CBLAD distributed maps depicting hydrologic units (watersheds) to all Tidewater localities to assist them in developing comprehensive stormwater management plans.
Stormwater Management Guidance Calculation Procedure and Training	CBLAD developed a nonpoint source pollution load calculation procedure for stormwater management and distributed it to the localities. It also conducts training sessions on stormwater management and site plan review for the localities.
Technical Guidance	CBLAD prepared: 12 information bulletins interpreting various parts of the regulations as well as new guidance documents for the localities, official policy guidance listed annually in the <i>Virginia Register of Regulations</i> ; and two versions of <i>A Guide to the Bay Act</i> .
Wetlands Delineation Training	CBLAD provided scholarships to local government staff so they can attend instructional courses on using the <i>Federal Manual for Identifying and Delineating Jurisdictional Wetlands</i> .
Septic Pump-Out Criteria Computer Software	CBLAD provided computer software to all Tidewater localities to assist them in administering septic pump-out programs. The software was originally developed by Chesterfield County to monitor the installation and maintenance of on-site sewage treatment systems. CBLAD has also trained local government staff in using the software and has assisted localities in developing their own septic tracking databases.
Local Government Liaison Network	CBLAD staff are assigned to Tidewater localities to provide technical assistance and facilitate local Bay Act program development.
Education Publications	Some examples include a better site design handbook and a brochure entitled, <i>Working to Protect Streams, Rivers, and the Bay</i> .

Source: Chesapeake Bay Local Assistance Department.

Table 13					
Tidewater Locality Responses on Effectiveness of CBLAD Assistance and Training Opportunities					
	Percentage of Respondents Reporting:				
	Strongly Agree	Agree	Disagree	Strongly Disagree	NA*
The amount and quality of assistance provided by the local liaison assigned to this locality is appropriate.	37	47	12	4	0
CBLAD staff provide responses to locality questions in a timely manner.	43	53	2	2	0
I am comfortable with the amount and effectiveness of the training opportunities provided by the department.	8	57	27	4	4
Note: NA – Not Applicable. There were 51 responses for the questions shown.					
Source: JLARC staff analysis of results for a survey sent to the 84 Tidewater localities.					

CBLAD staff also frequently attend quarterly meetings of planning district commissions. Overall, 65 percent of the 51 respondents to the JLARC survey of Tidewater localities gave a positive rating to the amount and effectiveness of the training opportunities provided by CBLAD.

Still, local staff indicate that CBLAD needs to do a better job of providing them with training opportunities. CBLAD has conducted four local government technical assistance surveys to assess the needs of the localities and planning district commissions and also to assist the department in prioritizing its outreach efforts. In response to the 1996 survey, CBLAD reported that localities identified “learning about the experiences of other localities in administering the Bay Act and sharing information on innovative implementation strategies” as a very high priority. And in a similar survey conducted by CBLAD in 1998, respondents indicated a high level of interest in “regional workshops on selected topics.” During the course of this review, two localities indicated to JLARC staff that CBLAD should present these types of program-wide meetings as a forum for localities to discuss the advantages and disadvantages of their own local programs.

However, it was not until May 2002 that CBLAD held its first ever Tidewater-wide educational program. More than half of the Tidewater localities were represented at the day-long session, with representatives from thirty-seven of the 46 Tidewater cities and counties attending. At the time, CBLAD staff indicated that this would become an annual event allowing localities to share programmatic innovations with one another while department staff would provide presentations on general topics. Since May, however, CBLAD has eliminated the part-time position that was responsible for organizing the conference. This along with the reduction of the department's budget by \$1 million, may make it difficult for the department to offer this training annually. However, according to CBLAD staff, these responsibilities have been reassigned to another full-time staff member, and the agency reports that currently it still plans to hold another conference in May 2003. The department should continue to make this annual conference a priority.

Recommendation (4). The Chesapeake Bay Local Assistance Department should continue to hold Tidewater-wide workshops as a mechanism for creating consistency across the Tidewater localities and providing an opportunity for local governments to share techniques with one another.

CBLAD NEEDS TO IMPROVE OVERSIGHT AND ENFORCEMENT OF LOCAL PROGRAMS

As discussed in Chapter II, the board ensures that the local programs contain the elements required by the *Code of Virginia* and regulations through its consistency review process. Despite the board's responsibility to ensure the on-going compliance of the local programs with the conditions established by the Bay Act, it appears CBLAD has not done a good job of evaluating local program implementation. In addition, the board has preferred to continue to work with localities rather than take enforcement action to correct issues of non-compliance. In 2001, the State's Attorney General clarified the board's enforcement options; however, the willingness of the board to use these tools is unclear. At its September 2002 meeting, the board formally approved the department's new oversight mechanism that could help address some of these shortcomings.

CBLAD Oversight and Enforcement of Local Programs Has Been Inadequate

The board is required to ensure the compliance of the local programs with the Bay Act. Specifically, §10.1-2103(10) of the *Code* orders the board to take:

administrative and legal actions to ensure compliance by counties, cities, and towns with the provisions of this chapter including the proper enforcement and implementation of, and continual compliance with, this chapter.

Nonetheless, it appears the greatest weakness in the department's administration of the Bay Act has, perhaps, been its lack of adequate oversight of the local programs' day-to-day administration. CBLAD's policy for determining on-going program consistency at the local level is comprised of following-up on public complaints received at the department's Richmond headquarters, therefore, it has been described as a reactive rather than proactive approach. The board's ability to use enforcement as a remedy in cases of non-compliance is weakened without a strong oversight program. Currently, the department intends to implement a comprehensive local implementation evaluation program in January 2003.

CBLAD Focused on Performing Compliance Reviews Prior to 1997.

According to CBLAD documents, State-level enforcement during the early years of the program focused on Phase I and II compliance, by ensuring that local governments properly designated the CBPAs and adopted the performance criteria and changes to their comprehensive plans, subdivision ordinances, and other land use requirements. These reviews, on-going since 1991, provided reports and recommendations of findings to the board and other standing committees.

During this time, CBLAD staff handled issues with local programs as they arose, but no formal policy existed for assessment of the on-going implementation of those programs. According to CBLAD staff, it was understood that this was part of their duties, but a desire to complete Phase II compliance and a lack of resources combined to lower its priority within the agency. JLARC staff were told by several persons associated with the Bay Act that at one point during the mid-1990s, staff were directed not to follow-up on how those local programs were administered in accordance with the Bay Act and regulations, once those local programs had been determined to be consistent with the Phase I and Phase II requirements. The department, they were told, had no authority to evaluate the consistency of local decisions with the Bay Act after the programs were implemented.

Complaint-Based System Begun in 1997 Has Not Been Adequate. In 1997, the General Assembly amended language in §10.1-2103(10) of the *Code of Virginia* to explicitly grant the board the authority to ensure that local programs are being properly implemented and enforced and are also continually compliant with the Bay Act's provisions. As a result of this statutory change, the board adopted the "Interim Procedure for Reviewing Local Program Implementation." With the interim procedure, a process was put in place through which any complaints lodged with the department were investigated. An enforcement position was created within the department and charged with this responsibility. Upon notification of a potential violation, CBLAD contacts the locality to discuss the issue and, if warranted, makes a site visit. The site visit also presents an opportunity to evaluate other aspects of the local program. In adopting this procedure, the board and department noted "a more detailed process should be established" for determining local implementation. According to CBLAD documents, more than 60 official complaints have been investigated by the department since 1997, of which fifteen resulted in CBLAD identifying Bay Act issues.

Still, the complaint-driven nature of the interim procedure places too much responsibility outside the agency to identify potential non-compliance. This policy presumes that upon recognizing Bay Act violations, private citizens will take the ini-

tiative to bring these violations to the attention of authorities, that they will know CBLAD is the correct agency to contact, and will obtain the department's address or phone number to do so. In addition, if the violation is instead reported to the local government, CBLAD may never be notified regardless of whether the problem is legitimate or not.

CBLAD recognized the inadequacy of its enforcement policy as part of its FY 2000-2002 biennium budget request. The department's request for funding states that the complaint-driven policy has hindered the department's ability to perform its oversight responsibilities. Language in the request states:

under the current system, CBLAD can take action against a locality for non-compliance with the Act and Regulations only if a pattern of inaction or non-compliance is demonstrated over time. When performing only in a reactive, complaint based system, it is essentially impossible to ensure effective local compliance in its implementation program.

Due to its lack of a systematic method to measure local program compliance, the department does not have sufficient evidence to determine how well local programs are complying with the Act or the regulations.

In addition, the department's attempt to track local implementation as part of its competitive grants program did not provide sufficient and useable information. CBLAD required all competitive grant recipients to fill out quarterly enforcement tracking forms. These forms requested, for example, the number of times a locality issued a building permit, executed a best management practices agreement, or reviewed a water quality impact assessment. However, this information was only required of those programs that received grant funding. Furthermore, the department was unable to use the information in a measurable way, and decided to discontinue its use. According to the CBLAD grants program coordinator, although the department continued to require the submission of quarterly tracking forms, it realized as early as three years ago, that the information was not being used in-house to systematically review implementation. CBLAD eliminated the requirement for localities to supply enforcement tracking information in FY 2002.

Factors Contributing to the Lack of More Proactive Oversight and Enforcement by CBLAB. A board member and several CBLAD staff have stated that, historically, the board and the department have preferred to work with a locality to correct any deficiencies rather than take enforcement action against them. According to CBLAB's chairman:

CBLAD's legal enforcement options are limited and, because the program is a "partnership" between the State and localities, CBLAD prefers to methodically work through problems with localities – as partners – rather than sue them.

The chairman added that the legal advisor from the Attorney General's office who serves CBLAB has told the board that the Commonwealth prefers not to find itself in the position of having to sue a local government.

The department's complaint-driven policy has been attributed in part to a lack of resources available to the department to mount a proactive program to review violations. This includes limited funds available to localities. In fact, the CBLAB board chairman told JLARC staff that "CBLAD doesn't have enough money or enough people" to more aggressively enforce locality consistency.

Delays in the promulgation of CBLAB's revised regulations may have also affected the degree to which the board and the department pursued oversight and enforcement activities. Work on the revised regulations began in 1996, but the regulations did not become effective until March 2002. As mentioned, the board realized that a more formal policy than the Interim Procedure would likely be needed. However, as a board member told JLARC staff, they did not want to take legal action against a locality using the old regulations.

One of the shortcomings in the regulations CBLAB sought to revise was some ambiguity concerning the rules regarding the 100-foot buffer portion of the Resource Protection Areas (RPA). During the time that CBLAB's new regulations were delayed, some localities took the opportunity to allow encroachments into the landward 50-feet of the 100-foot buffer "by right." The board was unable to take action against these localities for fear that, legally, their position was untenable because the regulations in question were so loosely written as to allow the encroachment into the landward 50-feet.

Furthermore, localities that chose to interpret the regulations as CBLAB intended claimed that the inconsistencies in how the regulations were being interpreted put them in a difficult position with developers and landowners. The following comments from county respondents reflect these concerns:

The disparity from locality to locality regarding enforcement demonstrates a lack of overall enforcement and makes the job of localities difficult.

* * *

Enforcement of local program implementation has only taken place on a complaint basis. I feel that the local program reviews that CBLAD is about to begin should greatly improve its ability to ensure adequate implementation of local programs.

* * *

CBLAD has not initiated its planned "Compliance Evaluation" program as of yet. Until that program becomes full[y] operational, CBLAD will not be able to ensure adequate enforcement on a systematic level.

Recent Attorney General's Opinion Supports CBLAB's Legal Authority to Enforce the Act, But the Board's Willingness to Use These Powers Is Unclear. In November 2001, the State's Attorney General issued an opinion clarifying and strengthening the board's ability to ensure that the localities comply with the Bay Act and the regulations. Specifically, the Attorney General found that the board may:

(1) bring legal action to discontinue a development based solely on an approved site plan that clearly shows a violation of the Act and Board Regulations; (2) file an injunction against site developers where they are violating the Act and Board Regulations; and (3) seek a court order prohibiting the issuance of permits [for land-disturbing activities] by a locality until it is compliant with the Act and Board Regulations.

Members of the board contacted by JLARC staff indicated that the board would use these powers if necessary, but also seemed unclear about exactly what this opinion meant. For example, prior to the Attorney General's opinion, CBLAD staff had noted in its response to public comment on the board's regulations that the board does not have the authority to take action against an individual, but can take a non-compliant locality to court to force proper implementation. After the receipt of the Attorney General's opinion, a member of the board stated to JLARC staff that the board could take action against a locality, but was still unsure whether the same action could be taken against a developer.

The Attorney General's opinion confirms that CBLAD has the authority to take certain legal actions if necessary, and the board should develop a policy or procedure that incorporates these legal tools into its enforcement process. In response to questions from JLARC staff, CBLAD's acting director indicated that where the Attorney General's opinion defines certain legal measures, the board's use of those measures is authorized. The acting director also identified training for the board members on the application of the Attorney General's opinion as an important area that the department, in conjunction with the legal advisor from the Attorney General's office who serves CBLAB, needs to address. Particularly, as it develops a new compliance review program, the board should take the opportunity to inform local officials, developers, and other interested parties about the potential administrative and legal mechanisms that are available to the department for ensuring compliance with the intent of the Bay Act and regulations.

Recommendation (5). **The Chesapeake Bay Local Assistance Department should provide training to the members of the Board and the local governments on the potential administrative and legal options available to the Board for ensuring compliance with the provisions of the Bay Act and regulations.**

CBLAD Is Attempting to Implement a Compliance Review Process

In revising its regulations, the board sought to specifically address the requirements of §10.1-2103(10) of the *Code of Virginia* by adopting a local program implementation mechanism. This "Local Program Compliance Review," requires that local governments report annually on the implementation of their programs. In addition, the program provides that the department will perform a compliance review of local implementation, in conjunction with the local governments, on a five-year cycle.

This program will certify “that the local program is being implemented and enforced by the local government consistent” with the Bay Act and the regulations and, as a result, is in compliance. As stated under 9 Virginia Administrative Code (VAC) 10-20-250, the information will be used to:

assess local patterns of compliance with the Act [and regulations] and to evaluate the need for an administrative proceeding to more closely review any individual local government’s compliance.

The elements of the local program to be reviewed include, but are not limited to, protection of CBPAs, local application of BMPs, enforcement of the septic-tank pump-out mandate, and enforcement of the agricultural and silvicultural agreements. CBLAD staff are also required to perform site visits to development activities in the field. CBLAD staff have already piloted the review process in Portsmouth and Isle of Wight County.

Development of this policy began in 1997, but the board and the agency instead chose to focus on completing the Phase I and Phase II consistency reviews. According to a CBLAD staff person, the department’s limited staffing precluded it from devoting adequate resources to developing a local implementation review and addressing the consistency reviews at the same time.

Under the new “Local Program Compliance Review,” localities will be required to submit an annual self-evaluation based on a checklist developed by CBLAD. For the second part of the review, the department has organized its compliance review process to include:

- CBLAD staff reviewing development files and plans with the local program contact,
- a site visit by CBLAD staff to evaluate whether development is occurring as identified on the plans, and an assessment of best management practices that may have been used,
- locality staff collecting and providing the liaison with information identified by CBLAD as part of its “Locality Checklist,” and
- CBLAD evaluating the local program using their own set of checklists.

This information would then serve as the baseline for the localities’ five-year evaluations. At its May 2002 Workshop, CBLAD’s lead planner for the compliance review process stated that information collected from these reviews would be used to better coordinate the types of technical assistance and determine the resource needs of the localities.

The department has recognized that reviewing local implementation of the 84 Tidewater localities will involve staff spending, on average, three to four months reviewing each locality. Since each liaison will likely be able to complete three to four reviews per year, it is estimated, that given CBLAD’s current resources, the process will take approximately 42 months to complete.

CBLAD's acting director told JLARC staff that three to four additional positions would be necessary to adequately operate the implementation review program. With the State's current fiscal situation, this may be difficult to achieve. The department's request for two positions to perform these activities as part of its 2000-2002 biennium budget request was denied.

CBLAD had expected to receive funding for an implementation compliance officer for FY 2003 and FY 2004 from the State's share of the federal Coastal Non-point Pollution Control Program money administered through DEQ. However, according to the acting director, after the reduction of grant funding by the General Assembly, CBLAD decided not to create an implementation review officer position. Instead, the department asked DEQ and DCR to provide them with any available grant funds where CBLAD's activities meet the requirements of that grant so that CBLAD could reprogram that funding to the local competitive grants program.

CBLAD attempted to consider the time and effort that local government staff would need to perform these reviews. For example, the department said that it would allow localities to begin collecting and reporting the required information from the date of program adoption forward. In addition, the initial objective of the program will focus more on observing local administration "on the ground," through field investigations and on-site evaluations of conditions than on reviewing files.

Because all 84 Tidewater localities are virtually consistent with the requirements of Phase I and Phase II, CBLAD needs to continue to refocus its primary efforts toward implementing and carrying out the activities related to the "Local Program Compliance Review" program. Although the department is able to state that all localities have adopted land use ordinances containing water quality protection measures, until it is able to measure the extent to which these measures are actually administered in each locality on a day-to-day basis, there will be no way for it to definitively measure effectiveness. Furthermore, this information will likely serve as the board's administrative record if it has to "build a case" of non-compliance against a locality. As a result of the importance of this information, CBLAD should ensure the information is collected accurately and uniformly by providing training opportunities to the localities as soon as possible after program implementation.

Also, CBLAD currently has five performance measures that it has filed with the Department of Planning and Budget. As has been appropriate relative to the focus of CBLAB and CBLAD in the past, one of these five measures addresses the number of completed local program reviews, to determine local program consistency with the Bay Act. However, with the greater focus that the agency expects to give to compliance reviews, it appears appropriate for CBLAD to develop and submit a new performance measure that addresses the impact of its compliance review activities.

Recommendation (6). The Chesapeake Bay Local Assistance Department should begin training local program staff on the requirements and activities associated with the Local Program Compliance Review as soon as possible after adoption by the Board. The training should include,

but not be limited to: the types of information needed to be tracked, how it should be reported, and how it should be recorded when it is first received.

Recommendation (7). The Chesapeake Bay Local Assistance Department should develop and submit a new performance measure to the Department of Planning and Budget that will address the outcomes or impacts of its compliance review process.

SEVERAL ISSUES REGARDING STATE FUNDING OF RESOURCES FOR THE BAY ACT PROGRAM NEED TO BE ADDRESSED

Section 10.1-2100 of the *Code of Virginia* (the “general provisions” section of the Bay Act) provides that the State’s role as a cooperative partner with the localities includes the provision of resources to help carry out the Bay Act. State funding for the Bay Act as administered by CBLAD has never been a major funding item, with appropriated amounts over the last twelve years ranging from a low of \$2.1 million in FY 1997 to a high of slightly less than \$3 million in FY 1991. With the State currently in a budget-cutting situation that is anticipated to impact almost all agencies, there is uncertainty as to the level of resources that will be provided by the State in the future, for activities similar to those provided or administered by CBLAD in the past.

Several key funding policy issues that appear to require attention, given their potential relationship to the State’s ability to fulfill its anticipated role under the Bay Act, include: (1) the impact of budget constraints upon CBLAD’s non-grant funding activities, (2) the impact of the State’s virtual elimination of the local grant fund program, and (3) the potential need for a clearer State policy on how Bay Act program activities are to be funded.

Budget Constraints in CBLAD Non-grant Funding May Reduce Its Ability to Perform Certain Key Functions in the Future

According to CBLAD’s budget request for the FY 2002-04 biennium, from the agency’s inception, it has not had sufficient funds to cover its non-personnel expenses, such as office rent, equipment management, and staff training. The agency historically has relied on staff vacancies and turnover as well as funds available from carry forward amounts to cover these costs. Between FY 1998 and FY 2001, CBLAD calculates that it experienced an average vacancy/turnover rate of about 16 percent, providing it with enough funds to cover these costs. Since FY 1996 or FY 1997, CBLAD has also saved some costs by ceasing to administer its own payroll function (the Department of Accounts now administers it). As a result, a full-time administrative position was reduced, as duties other than payroll that were performed by this position were moved to remaining positions within the agency.

As a result of a lack of vacant positions at the time of its biennial budget request, the department foresaw a need for about \$240,000 in additional funds in FY 2003 to meet non-personnel costs, and a need for about \$185,000 in additional funds in FY 2004. More recently, CBLAD again experienced staff turnover, and it cur-

rently has three vacant positions. These positions include: a Senior Environmental Planner position that functioned as a locality liaison, a Senior Environmental Engineer position responsible for providing technical assistance to local governments, but used primarily to perform the agency's information technology functions, and a Senior Environmental Engineer position responsible for the agency's Geographic Information Systems.

Although these vacant positions could potentially be used to achieve the type of cost savings that the department has historically used to meet non-personnel expenses, there are some concerns. First, like other agencies in State government, CBLAD will need to make some further reductions in its operating budget compared to the amounts provided in the 2002 Appropriations Act. Second, leaving the current vacancies open will have an impact on agency operations. There are some concerns about the workload these vacancies place on remaining staff and whether or not the agency will be able to continue with the Polecat Creek Monitoring Project.

Recent CBLAD Vacancies May Impact CBLAD's Ability to Provide Adequate Assistance to Localities and Internal Information Technology Support. As a result of the elimination of CBLAD's funding for competitive local grants by the 2002 General Assembly, the department is likely to receive an increased amount of requests for assistance from the localities. However, CBLAD's ability to meet this increased local need may be diminished as a result of the department's current vacancies. For example, the locality liaison position was responsible for program development and review in seven localities. If this vacancy is not filled, these functions would have to be added to the responsibilities of another liaison. The locality liaison was also going to be responsible for performing local program compliance reviews once that policy is initiated. The acting director has indicated that of the three vacancies, filling the locality liaison position is the most critical for addressing the agency's functions and the position has already been advertised.

In addition, the loss of the environmental engineer responsible for providing technical assistance to local governments may impact the ability of the department to meet its information technology needs. According to the acting director, in the past, CBLAD used the person in this position to also provide the agency's information and technology services, although the description for this position indicates that providing agency computer system support was not a core responsibility. The acting director also stated that when filling the environmental engineer position, the department will not seek to address its information technology needs. CBLAD has instead entered into an agreement to receive its information technology support through the Department of Information Technology (DIT). The acting director added that this arrangement may be an acceptable alternative to a full-time information technology position, but that it is too early to determine the effectiveness of this relationship.

Future Status of the Polecat Creek Monitoring Project Is Uncertain. The Polecat Creek project is a ten-year project initiated in 1993 to measure the effectiveness of the Bay Act by monitoring the long-term water quality of the Polecat Creek watershed located in Caroline County. According to CBLAD's acting director, the Polecat Creek project was supposed to be funded annually at \$150,000. How-

ever, that amount was reduced to approximately \$47,000 per year beginning in FY 1994, as a result of State budget cuts at that time. Funding remained at this amount until the General Assembly appropriated an additional \$60,000 for FY 1999 and FY 2000, increasing the total amount to more than \$107,000.

Nonetheless, in recent years, funding apparently has not been sufficient to sustain one of the five stations that is used to monitor chemical and hydrological data (there also are eight or nine biological monitoring sites). And, if CBLAD needs to make further budget reductions, as anticipated, then the Polecat Creek project may be one of the items that would have to be targeted for reduction or elimination. Further reductions in the number of monitoring stations may render the program unproductive. Cutting the project would have two undesirable impacts: (1) the anticipated benefit from the project is still in the future, so the past expenditures on the program will be wasted, and (2) the program is one of the few activities that the State has underway that can help it assess the impact of land use planning activities under the Bay Act.

Recommendation (8). The Chesapeake Bay Local Assistance Department should seek to fill its vacant local liaison position, when State hiring and budget policies provide this opportunity.

Recommendation (9). The Secretary of Natural Resources should request that the Chesapeake Bay Local Assistance Department prepare a document prior to the 2003 General Assembly Session that will assist policy-makers in deciding whether the Polecat Creek Monitoring project can and should be continued in spite of current State budget difficulties. The document should overview the approach that the Polecat Creek project has taken for assessing the impact of land use policies under the Bay Act, and outline the probable time frame and costs that are necessary to achieve that purpose. The document should also identify the level of cuts in non-grant funds that the agency can absorb without reducing or eliminating the project.

Budget Reduction by the General Assembly Virtually Eliminated Local Grants Program

As part of the department's justification for its FY 2003 – FY 2004 budget request, CBLAD identified grant funding to localities as the program's most important funding need. Specifically, the budget request states "funding has been the greatest issue for the Agency and the localities. Several local governments have expressed discontent that the program is an unfunded mandate." Additionally, in the course of JLARC's study, several local governments identified funding their local programs as "difficult" when considering other local priorities. CBLAD requested an additional \$629,000 for each year of the 2002-2004 biennium.

However, the 2002 General Assembly appropriated only \$40,462 to CBLAD for the local assistance to localities program for both FY 2003 and FY 2004. This amount was substantially less than the approximately \$1 million that had been appropriated for FY 2001 and FY 2002. CBLAD was forced to virtually eliminate its

grant program as a result, and staff indicated that this action will greatly impact the ability of the localities to administer their local programs. For example, CBLAD indicated in its 2002-2004 biennium budget request that failure to receive the additional funding they were seeking would:

continue to postpone full local compliance and enforcement of the Bay Act due to its current levels of financial assistance and the poor-cost effectiveness of legal action.

Chapter II of this report identifies the localities' response to this reduction.

According to the department, appropriations available for local grant funding have been reduced by more than 62 percent between FY 1991 and FY 2002 (Table 14). There is some indication that funding for the local grant program was to be reduced as the program matured. According to CBLAD's March 1990 *Quarterly Report on Implementation of the Chesapeake Bay Preservation Act*, the provision of greater up-front financial assistance:

is a planned economy to vastly reduce the level of assistance necessary from the state in future years. Local revenues are projected to rise and therefore localities will be able to assume more of the program expense.

However, it does not appear as though funding was to be entirely eliminated.

Fiscal Year	Appropriation for Local Competitive Grants Program	Locality and PDC Grant Awards	Number of Awards
1991	\$ 1,314,750	\$ 1,283,371	51
1992	849,000	507,885	32
1993	599,000	921,346	39
1994	599,000	927,738	33
1995	599,000	689,959	30
1996	724,000	785,744	31
1997	571,962	858,726	32
1998	571,962	646,073	24
1999	571,962	563,007	23
2000	571,962	571,962	20
2001	571,962	571,962	21
2002	493,431	493,431	14
2003	40,462	--	--
2004	40,462	--	--
TOTAL FY91-FY02	\$ 8,037,991	\$ 8,821,204	350

Note: The department currently plans on funding eleven grant requests for FY 2003. According to CBLAD, DCR and DEQ have made \$231,055 available from the State's share of the federal Coastal Nonpoint Pollution Control Program. These projects must first secure approval from the National Oceanic and Atmospheric Administration before being finalized.

Source: JLARC staff analysis of CBLAD documents and 2002 *Virginia Acts of Assembly*.

While only 14 grants were given by the department in FY 2002, this may have reflected priorities for achieving Phase I and Phase II consistency. As the Bay Act prepares to enter an on-going phase of review and enforcement, the ability to fund implementation and enforcement activities at the local level may be critical to making the program effective from the beginning. As a result of its agreement with DCR and DEQ that was discussed earlier in this chapter, CBLAD expects to have more than \$230,000 in grant funds available for the local governments and PDCs for the federal fiscal year of October 2002 through September 2003. The department estimates that it will now be able to fund eleven projects.

Recommendation (10). The Chesapeake Bay Local Assistance Department should include a request for funding for a local competitive grants program to achieve Bay Act purposes as part of its budget request, at a time when State revenue availability appears to provide this opportunity.

The State Lacks a Clear Policy on Funding Responsibility for Bay Act Program Activities

Section 10.1-2100 of the *Code of Virginia* describes the Act as a “cooperative state-local program.” The section provides that the State’s responsibility is to:

act primarily in a supportive role by providing oversight for local governmental programs, by establishing criteria as required by this chapter, and by providing those resources necessary to carry out and enforce the provisions of this chapter.

This statutory section clearly establishes that the State has a responsibility for providing resources to meet the requirements of the Act. However, the extent of that responsibility appears to be unclear. On one hand, CBLAD’s report on the western expansion of the Bay Act suggests that the language of the Bay Act implies the State has an obligation to provide the resources that are necessary. In the executive summary, the report indicates that:

issues pertaining to the costs to local government are addressed only in general terms since the Act carries with it an obligation to provide those resources necessary to carry out and enforce its provisions.

On the other hand, the State has not in fact assumed the responsibility for full funding of local efforts to implement and enforce the Act. Individuals associated with the development of the statutory language indicate that the intent for funding was the same as the intent expressed for the program throughout the statutory section: that the program is a “cooperative State-local program.” Historically, localities have applied some local resources to the effort. Although obtaining accurate figures on local expenditure levels is difficult due to the differing ways in which the local programs are configured, it does appear based on available information that in recent years, localities typically apply as much or more local resources to meet Bay Act requirements than the amount of resources provided to them by the State.

The potential ambiguity of the statutory language could be addressed by amending it to state that the State will provide “a State portion” of those resources that are necessary for the program. Nonetheless, the expectations for State funding would still be uncertain, as the State does not currently have a policy indicating the scope of State assistance that is appropriate. The lack of a policy on State assistance means that budget cuts can be made on an ad hoc basis, without consideration of any minimum level of financial resources that the State must make available to meet the conditions of the Act. Localities, prodded to engage in sound land use practices to help the State meet its Bay Act agreement commitments, are faced with uncertain support in terms of resources from its partner for the Bay Act effort.

Recommendation (11). The General Assembly may wish to consider clarifying the Bay Act regarding the nature of the cooperative State and local role in providing the resources needed for the Bay Act program under §10.1-2100 of the *Code of Virginia*.

CHANGES TO THE STATE'S STRUCTURE FOR ADMINISTERING ITS BAY ACT FUNCTIONS ARE UNDER CONSIDERATION

The mandate for the JLARC review of the implementation of the Bay Act was passed during the 2001 General Assembly Session. Since that time, major developments at the 2002 General Assembly Session may impact the State's administration of the program. The virtual elimination of CBLAD's local grants program has already been discussed in this chapter. In addition, consideration is being given to consolidating CBLAD into another agency, the Department of Conservation and Recreation (DCR).

The 2002 General Assembly has directed the Secretary of Natural Resources to prepare a plan for the merger of CBLAD into DCR. The plan to be developed by the Secretary is to “merge operations” of CBLAD with the Division of Soil and Water Conservation in DCR. This division at DCR operates a number of programs that address the impact of land use on water quality, and also has an aim of reducing nonpoint source pollution in Virginia's waters, including the Bay. The division is larger than CBLAD, with over \$16 million in annual funding and more than 90 FTEs. The Secretary's plan for the merger is to be submitted by November 2002. As part of its consideration of this mandate, the Secretary's Office has been assessing the issue of whether the merger is the best course of action for the State to undertake.

This is a substantial issue that could impact how the State administers the Bay Act. In addition, as part of the process for determining the scope of JLARC's review of State spending, JLARC members indicated at a July 8 meeting of the Commission that the issue of CBLAD's potential merger should be considered as part of the review for HJR 622. Therefore, this chapter concludes with a discussion of four potential ways to organize CBLAD's functions. The discussion focuses on information obtained during the review that may be relevant to this policy choice. While a formal recommendation is not made, it appears that serious consideration should be given to allowing CBLAD to continue functioning as a separate entity,

with the agency focusing its limited resources on its core functions of land use planning, providing general and compliance oversight, and technical assistance as needed.

First Option: Continuing with the Bay Act as Currently Organized

The Bay Act was designed as a State-local partnership to address specific activities in the Bay watershed that could potentially harm environmentally sensitive lands through nonpoint source runoff pollution. In 1998, the director at the time stated that “the majority of [CBLAD’s] mission and staff work is directed at assisting local governments in meeting the land management requirements of the Chesapeake Bay Preservation Act.” As discussed previously in the chapter, it appears that the Tidewater localities would likely agree that CBLAD has been helpful to them in meeting the land use planning requirements of the Bay Act.

The first option would continue the current relationship between the localities and CBLAD, including the continuance of CBLAD as a separate agency. The argument for the status quo is that despite various obstacles over the years, progress has been made by the Tidewater localities with CBLAD’s support. Measured in a most basic way, the Tidewater governments have now adopted land management activities that likely have some positive result on water quality through controlling nonpoint source runoff. It is not altogether clear the localities would have addressed these measures without CBLAD’s requirements and assistance. The State and the localities were also able to accomplish this with somewhat limited resources.

Additionally, it appears that the local governments have been able to operate their programs in ways that do not drastically reduce the manner in which land owners and developers may wish to use their property. Although some localities have argued that the Bay Act does not provide local flexibility, the majority of respondents to the JLARC survey of Tidewater localities indicated that the Bay Act strikes a proper balance between State regulation of land use and private property concerns. Furthermore, 70 percent of the respondents to the survey indicated that they believed that the Bay Act has been effective in limiting pollution from reaching the Bay.

Moreover, the focus of the localities and CBLAD is now moving in a new direction, away from development of local programs and toward implementation and enforcement. Practically all local programs are Phase I and Phase II consistent. Ensuring that the local programs are being properly implemented and enforced is important to continuing any success the Bay Act may have already achieved. To eliminate the Bay Act now or to consolidate CBLAD with another agency may result in a loss of momentum and effort on implementing and carrying out the new oversight review program.

Second Option: Consolidate CBLAD with DCR

To a degree, DCR and CBLAD perform similar functions related to nonpoint source pollution. In fact, DCR is the State’s lead agency on nonpoint source

pollution. Combining CBLAD's functions with DCR may produce some potential benefits. However, those benefits would have to be measured against the potential impacts the change may have on the State's overall Chesapeake Bay efforts.

A 1998 JLARC report on the Structure of Virginia's Natural Resources Secretariat noted that there are some similarities in the work conducted by CBLAD and DCR's Division of Soil and Water Conservation. The report noted that at the time CBLAD was created, DCR did not have many of the nonpoint source pollution programs that it currently has. To carry out their responsibilities, the JLARC report noted that both CBLAD and this DCR division have programs which address urban land development and agricultural activities as sources of nonpoint source pollution. The report noted that some degree of enhanced efficiency and improved coordination might be achieved through a consolidation of their efforts. However, the report did not make a recommendation, noting a number of potential concerns, such as "a potential loss of some visibility to Virginia's efforts to clean up the Chesapeake Bay, potential loss of benefits derived from having work performed in a small agency, and ensuring that the effort in the Tidewater area would not be diminished."

Both CBLAD and DCR require land disturbance activities to be consistent with local erosion and sediment control ordinances. As part of the Bay Act, however, Tidewater localities are required to apply erosion and sediment controls to any land-disturbing activity in the Chesapeake Bay Preservation Areas at a lower threshold than in the rest of the State. Under CBLAD's regulations, Tidewater localities must require erosion and sediment control measures for land disturbing activities greater than 2,500 square feet. DCR's land disturbing activities threshold is set at greater than 10,000 square feet. Both agencies review erosion and sediment control proposals as requested by local governments. Since these reviews are based on the elements found in local E&S programs, the potential exists that CBLAD staff could rely on DCR staff to perform these reviews.

Stormwater runoff is another function where duplication of effort has been perceived. Both CBLAD and DCR have stormwater management policies and under CBLAD's new regulations, both use the standards and criteria established by DCR's State Stormwater Management Regulations. However, the Bay Act requires the Tidewater localities to have these programs in place, whereas the State Stormwater Program is a local option. Currently, both CBLAD and DCR review State agency projects using Virginia's Stormwater Management Regulations and provide comments back to the agency. Therefore, rather than duplicating project reviews, it may be better for DCR as the State's lead nonpoint agency to handle this function. According to CBLAD, General Assembly action may make stormwater management mandatory statewide in the future through the DCR law and regulations, thereby eliminating CBLAD's need for involvement. However, it is unlikely there would be substantial cost savings as a result, because the resulting expansion of DCR's responsibilities and workload would also likely require additional resources for the department. Furthermore, maintaining the Bay Act's land disturbing activity threshold of greater than 2,500 square feet in Tidewater would require a statutory change to the State stormwater management program.

Similarly, the staff within DCR's soil and water conservation division (SWCD) may also be able to assume responsibility for writing CBLAD's soil and wa-

ter quality conservation plans (SWQCP). DCR already has staff in the Tidewater soil and water conservation districts who write nutrient management plans for agricultural activities. Furthermore, some of these plans have already been accepted as part of the SWQCPs. Agricultural plans for CBLAD's program require three parts (soil management, nutrient management, and integrated pest management) that address water quality through the protection of environmentally sensitive lands and proper application of nutrients. While CBLAD staff indicate that SWCD staff do not currently address all three elements in their plan, it is unclear, why these same elements cannot be delivered by DCR staff. However, this is not a case of duplicative effort in which economies can be achieved, because the resources historically available to DCR and CBLAD for this purpose are not sufficient to address the number of farms that could use plans.

Consolidating CBLAD into DCR may produce better coordination for policies such as erosion and sediment control, stormwater management, and agricultural soil and erosion policies. Better coordination of these policies would likely benefit the local governments who are required to adopt and enforce these requirements and may even eliminate some duplicative reporting provisions. The Bay Act may also benefit from DCR's infrastructure, which has staff located in 15 Soil and Water Conservation Districts and four watershed offices in Tidewater. This type of presence may allow liaisons to work more closely with their local governments.

However, it is unclear how much cost-savings would occur as a result of a consolidation. First, DCR does not currently have staff performing functions similar to CBLAD's liaisons. Therefore, CBLAD would likely have to be included as a separate division within DCR. Some costs savings may be produced from streamlining administrative functions such as budgeting within the broader agency and the inclusion of CBLAD's grants programs with those of DCR. In addition, DCR staff in the SWCDs may likely be able to address the agricultural plans under the board regulations.

However, CBLAD is currently the only State agency providing land use planning assistance to the localities. As a result, most of CBLAD's locality liaisons and environmental engineers would likely need to staff this new division. Additionally, increased bureaucratic layers resulting from consolidation with another agency may limit CBLAD's timeliness in responding to localities, something it has done effectively. In addition, the Commission on the Future of Virginia's Environment reported that the director of DCR's Soil and Water Conservation Division stated that in terms of stormwater management, the differences in the mandates between DCR and CBLAD would make it difficult to achieve substantial efficiencies through a consolidation.

Third Option: Create an Agency Charged with Limiting Nonpoint Pollution Impacts on the Chesapeake Bay, with Land Use Management Functions as Its Core

The State may wish to consider creating a single agency to focus only on coordinating the State's response to preventing future increases in nonpoint source pollution affecting State waters. Like the other options discussed in this section,

creation of a new agency will have to be weighed against the State's current fiscal environment. This agency could focus on the Chesapeake Bay only or on the State's other tributaries from a regional or watershed level perspective to better address broader nonpoint pollution control issues. A single agency overseeing the programs designed to protect the Bay's water quality may also allow the State to settle disputes between agencies involving overlapping authority and jurisdictions.

In addition, this agency may be able to develop and provide a full set of preventative practices, like best management practices, in a way that presents localities with a series of options that they could then pick and choose from to best fit the needs of their localities. Much like how the Bay Act is designed to permit flexibility among the local program, a series of water quality protection alternatives could be developed based on topography, type of watershed, or other factors. For example, during the course of the JLARC review, local staff indicated that regional retention ponds may have a much greater environmental benefit than individual ponds. Some localities have even adopted policies allowing developers to pay into a fund for the promotion of locality-wide retention ponds. This may also assist localities that are already substantially developed and find it difficult to include an individual BMP on a property.

Fourth Option: Transfer Functions CBLAD Shares with Other Agencies to Those Agencies, with CBLAD Focusing on Its Core Activity of Sound Land Use Planning

As discussed previously, CBLAD's core functions involve assisting local governments to address water quality protections through their land use management decisions. In particular, this assistance includes: management of the RPA buffer, better site design, and development of comprehensive plans and ordinances to include water quality measures. It also appears that CBLAD performs certain functions that are similar to those performed by other agencies. If responsibility for certain of these similar functions were transferred to other State agencies, CBLAD staff could better allocate the limited resources they receive to their core functions.

The similar activities performed by CBLAD and DCR were discussed earlier in this section. In addition, it is clear that the septic tank pump-out requirement would be better placed within the Department of Health's (VDH) Division of Onsite Sewage and Water Services. For example, local health departments permit the installation of new septic systems and, as a result, maintain records of previous installations. VDH also has greater expertise in the area of on-site sewage issues than CBLAD. However, VDH would need to adopt and implement regulations to perform this function. According to the director of the Division of Onsite Sewage and Water Services, VDH is in the process of attempting to do this. CBLAD indicated during the regulatory comment period, that they agree with this relocation, dependent on VDH implementing similar regulations.

CONCLUSION

In a response to the JLARC report on the Natural Resources Secretariat in 1998, CBLAD commented that:

The majority of [CBLAD's] mission and staff workload is directed at assisting local governments in meeting the land management requirements of the Chesapeake Bay Preservation Act. These requirements include RPA buffer management, more sensitive site design, and incorporating water quality protection objectives into local comprehensive plans and zoning and subdivision ordinances.

This comment, which appears to accurately reflect CBLAD's central mission, also addresses some of the key activities that are unique to CBLAD. If the State wishes to maintain a proactive involvement with the Bay Act, then it appears that the functions performed by CBLAD will need to continue to exist, irrespective of where those functions are housed. There are some concerns that a consolidation of CBLAD with another agency would bring limited benefits that may not justify this major structural change.

While some small cost economies and increased coordination of erosion and sediment activity may occur through consolidation, it does not appear that these benefits will be large. CBLAD is a small agency. Most of the staff have technical skills, the need for which is not anticipated to diminish in the foreseeable future under the responsibilities given to the State by the Bay Act and under the responsibilities given to CBLAD by Bay Act regulations. The technical assistance provided by CBLAD staff is generally rated well by localities. The potential for limited savings from potential efficiencies in administrative tasks could largely be realized outside of the use of a merger with another agency. For example, if CBLAD assistance grants are anticipated to be minimal or non-existent over the next few years, then the agency's need for a grants program manager is questionable.

A concern, however, is that if a merger is pursued at this time, CBLAB and CBLAD may lose momentum in the short term, and priority in the long term. For example, as indicated in this report, CBLAB and CBLAD recently revised the Bay regulations. These regulations provide for compliance review work, a direction in which the board and the department have begun to move. This appears to be movement in a direction that is overdue. If a merger is attempted, a lot of time and effort may need to be diverted to accomplish the structural change. There also is a related and longer-term concern -- that the State's commitment to address water quality protections through local land use planning and the use of mandatory requirements may be compromised. DCR has a much broader focus than water quality issues that includes the management of State parks; and its water quality efforts have focused on voluntary measures, particularly outside of the area covered by the Bay Act. It is unclear what priority DCR would give to Bay Act land use planning functions over the long term. There is a concern that a reduction in the visibility and priority of the Bay Act functions may result from CBLAD's incorporation into a larger entity. Therefore, the State may wish to give serious consideration to allowing CBLAD to continue performing its core functions as a separate entity.

Regardless of which of the four options in this chapter (or any other options) are deemed to be the best policy for the placement of the functions now performed by CBLAD, it appears that two core functions should be ensured. Wherever they are housed, there is a need for CBLAD staff to: (1) provide assistance to local governments with their land use planning needs, and (2) ensure that the provisions of the regulations pursuant to the Bay Act are enforced. There also will be a continued need to shift more of the focus from assessing the consistency of local programs (using comprehensive plans and ordinances) to assessing the degree of rigor with which the Bay Act is enforced in order to ensure that the desired water quality protection measures are actually undertaken.

IV. Expanding Bay Act Program Coverage in Virginia

The Chesapeake Bay watershed covers more than half of the land area in Virginia. Because the Chesapeake Bay Preservation Act (Bay Act) applies to only 35 percent of Virginia's Bay watershed, the remaining 65 percent (14,000 square miles) of Virginia's portion of the watershed is not subject to its provisions. The current Bay program, then, does not apply to 109 cities, counties, or towns in Virginia's portion of the Chesapeake Bay watershed.

The 2001 General Assembly considered requiring an expansion of the Bay Act to the entire Chesapeake Bay watershed in Virginia, but took no final action. Instead, it passed House Joint Resolution (HJR) 622 requiring, in part, that the Chesapeake Bay Local Assistance Department (CBLAD) assess the benefits to the environment, the changes in regulations, and the financial resources needed to extend the requirements of the Bay Act, and report those findings to JLARC.

CBLAD's findings and conclusions appear in the department's *HJR 622 Study: Chesapeake Bay Preservation Act – Expansion* report. A copy of the executive summary of this report is provided as Appendix C to this JLARC report. Also, the full report is currently available for downloading from the CBLAD web site.

Based on the benefits qualitatively described in its report, as well as CBLAD's view that an expansion of the Bay program will be necessary to meet the State's commitments under the 2000 Agreement of the Chesapeake Bay Program, CBLAD concludes that a westward expansion is warranted. CBLAD recommends that the vehicle used to cover most of the expanded activity should be a separate Act, however, possibly entitled the "Chesapeake Bay Rivers Act."

The CBLAD report appears to reflect a legitimate effort to meet a difficult assignment. The report provides some useful and relevant information related to the HJR 622 request, and relative to the issue of expanding the coverage of the Act. The report qualitatively describes the actions, benefits, and challenges that would be involved in expanding the territory covered by the CBLAD program. It also provides information on the current status of existing land use planning and ordinances in the expansion territory, qualitatively describes the types of costs that local governments would likely incur in participating in the program, and provides quantified estimates of State costs that might be incurred as part of an expansion effort. The report also provides a reasonable strategy for implementing the expansion effort.

However, the report seeks to assert the proven effectiveness of the Bay program in the Tidewater area as a part of the case for expanding the coverage of the Act to the western part of the watershed. This is a problematic aspect of the report, because it is premature at this time to argue that the Act itself has proven effective. Consequently, the report does not provide adequate evidence to establish this point. Instead, the report could have given more attention to what is known about the effectiveness of the key practices that are employed under the Bay Act program. Spe-

cifically, the report could have done a better job of describing what is known about the demonstrated (field-tested) effectiveness of practices such as the 100-foot buffer zone, while also acknowledging the limitations of and gaps in knowledge that still exist regarding these practices.

Further, the report does not succeed in overcoming a fundamental obstacle to meeting the study request – a lack of adequate information upon which to draw definitive conclusions about the benefits, costs, and the effects to local governments that are entailed in a westward expansion. The underlying assumption of the report -- that fully and accurately quantifying the costs of an expansion is not feasible at this time -- appears to be correct. However, the report could have gone further in addressing some information needs regarding the expansion of the program. For example, the report could have provided quantified best estimates for some elements of the expansion, based on available data, while clearly noting those elements that can only be addressed in qualitative discussion at this time. This would have provided an enhanced starting point for further discussion. (State agencies have provided estimates of costs and benefits for best management practices for achieving nonpoint source pollution reductions in other forums, such as in tributary strategy planning work). Also, the report does not adequately address the issue of the potential redundancy of Bay Act programs with other water quality programs that may be operative in the region, such as programs to develop farm plans.

Ultimately, though, the westward expansion is a policy decision that must be decided in the absence of fully conclusive data. There are risks to acting – the program may be more burdensome, more costly, and less effective than CBLAD hopes – and there are risks to not acting, in terms of the potential for increased water quality degradation and an inability of the State to meet its Chesapeake Bay Agreement commitments.

Two concerns tend to support a course of postponing a mandatory expansion of the program to most localities in the western part of the watershed, however. First, as discussed in prior chapters of this JLARC report, progress toward full implementation of the program in the current Tidewater region has been slow. Compliance review work has still not been fully implemented, the adequacy of program oversight for the purpose of ensuring local implementation is questionable, and the workload under the program has challenged the capacity of CBLAD's resources.

Second, this does not appear to be a particularly advantageous time for aggressively addressing the expansion issue. In considering various policy options, the difficulty of the State's current fiscal situation needs to be recognized. CBLAD itself, or in particular its grant funds, have been a target for budget cuts, and its status as an agency is unclear. State assistance may be critical for locality acceptance of the program in the westward part of the watershed, yet the State will likely have little funding to assist localities in implementing the program. This point presents a serious challenge for the State at this time, in terms of pursuing policies that would require that westward localities participate in the program.

The State may wish, however, to consider, some more limited actions in the short term to promote land management activities in the western part of the water-

shed. For example, the State could expand the Act's coverage to just the 13 localities that are part of planning districts commissions (PDCs) with currently-designated Tidewater localities, and/or encourage CBLAD staff to work with the localities most interested in participating, on a voluntary basis, in developing their land management planning programs in a way that is compatible with the Bay program.

OVERVIEW OF THE CBLAD REPORT

CBLAD developed its report during 2001 to address the requirements of HJR 622 from the 2001 Session. This resolution noted that legislation to expand the Chesapeake Bay Preservation Act to localities within the western part of the Bay watershed "has been proposed at least twice prior to the 2001 Session." However, no action had been taken. The resolution asked that CBLAD develop and submit a report to JLARC on the westward expansion that could be included in a broader JLARC report dealing with Bay Act implementation.

The CBLAD report, furnished to JLARC staff on November 27, 2001, consists of an executive summary, six chapters spanning 78 pages, and eight appendixes with supplemental materials. Key features of the report include:

- a proposal or strategy for statutory, administrative, and regulatory changes to accomplish a westward expansion;
- a description of anticipated changes in local land use planning and management practices that may be expected with an expansion of program coverage and that may be expected to bring water quality benefits;
- a discussion of the impact of an expansion on the need for State financial resources; and
- a discussion of local-level costs and effects.

CBLAD's Report Proposes Statutory, Administrative, and Regulatory Changes to Accomplish the Westward Expansion

CBLAD's report concludes that legislative action "to apply the goals, objectives, and programs associated with the Chesapeake Bay Preservation Act throughout the Chesapeake Bay Watershed in the Commonwealth is warranted." The basis for CBLAD's conclusion that a broad expansion is warranted will be discussed later in this chapter. CBLAD's plan or strategy for an expansion is discussed here first, to provide an indication of the nature of the approach that underpins CBLAD's thoughts about the benefits, costs, and impacts of such an expansion.

CBLAD's report distinguishes among three groups of localities that are outside of Tidewater Virginia yet are in the Chesapeake Bay watershed. These localities are designated in the report as either: (1) localities which should be included in the coverage of the current Bay Act, (2) localities which are proposed for inclusion as

part of an “expansion area”, and (3) localities within the watershed that nonetheless have a minimal impact on the Bay’s waters, and therefore are not suggested to be part of the “expansion area.” Figure 7 identifies the localities currently covered by the Bay Act in Tidewater Virginia, as well as the other watershed localities that fit into one of these three categories.

Under CBLAD’s plan or strategy for the proposed expansion, 13 localities are in the group that would be brought under the coverage of the current Bay Act program. These localities are part of PDCs that already have localities participating in the Bay Act. In these localities, the CBLAD report indicates that “program development and implementation could begin immediately.”

The CBLAD report proposes that the second and largest group of localities, which includes 91 of the localities in the expansion area, should be addressed by new legislation, which might be called “The Chesapeake Bay Rivers Act”. For this area, new regulations would need to be developed and adopted, through a “stakeholder process” (a process to obtain input from those to be affected by the new regulations) that would take about 18 to 24 months, and that would take into account the topography and geography that is typical in this area.

The report also places five localities in the third group. CBLAD indicates that these five localities in the watershed have minimal impacts on watershed water quality, and should not be part of the expansion.

CBLAD’s belief that an entirely new Bay Act and board regulations would be necessary for most localities is due in large part to differences between the topography of the western and eastern portions of the Bay watershed, as well as to the comments made during the locality outreach meetings held by the department. Physically, the western portion of the watershed is somewhat different, with land tending towards steeper gradients (making runoff to surface waters more likely), and karstic aquifers. Karst topography, prevalent in the Shenandoah Valley region, is characterized by porous limestone groundwater channeling areas that are unable to absorb pollutants from the water and make the waters more sensitive to additional contamination. The steeper gradients and karst topography, combined with the increased impervious surfaces associated with development, such as roads and parking lots, are sources of concern for the health of Virginia’s waters.

Statutory Changes. The primary statutory change proposed by CBLAD’s report would be the creation of a new Bay Act and Bay board for the proposed expansion area. Statutory changes suggested in CBLAD’s report include amending the definitions in §10.1-2101 of the *Code of Virginia* to include the 13 localities within the PDCs already under the Bay Act. CBLAD staff told the JLARC study team that this would immediately bring these localities into the program because new regulations would not need to be developed. It is unclear why these localities were not included as part of the original legislation. CBLAD’s acting staff director indicates that Manassas and Manassas Park may have been left out of the definition because the list of localities was taken from the Tidal Wetlands law, where the cities were not named – probably because they had no tidal wetlands within their jurisdiction.

The remaining 91 localities would be grouped together under a new Bay Act and board regulations. In addition, a new board would be created consisting of at least one representative chosen by the Governor from each of the planning districts in the expansion area. It was suggested during the local outreach sessions that the new Bay Act be named the "Chesapeake Bay Rivers Act" to reflect the different focus of the program in the western expansion area.

Findings in the CBLAD report indicate that changes in the process by which the new board's regulations would be created and adopted would take advantage of the experiences the department gained through the development and implementation of the Bay Act in the early 1990s. For example, the report finds that by first focusing on the comprehensive plan aspects of the local programs, the opportunity would exist for localities to address "water quality enhancement as part of the development process instead of having it viewed more as a structural and regulatory program" issue. CBLAD indicates that "a set of regulations that specifically addresses the comprehensive plan component" could be implemented within six months of the creation of a new Bay Act, thus enabling localities to address the required changes in their comprehensive plans as the development of the performance criteria takes place. CBLAD indicates that it would use a local stakeholder process to assist in the development of the new regulations.

Administrative and Regulatory Changes Would Include Amendments to the Designation and Performance Criteria. CBLAD's RPA and RMA requirements, as well as its performance criteria, will likely need to be reworked if the Bay Act is expanded. The RPA and RMA requirements would have to be adapted to account for the differences in the surface features of the Bay's western watershed compared to those in the Tidewater area.

In the Tidewater area, the RPA and the RMA are defined by criteria, such as those governing buffers, wetlands, highly erodible soils, highly impenetrable soils, and flood plains. Because these elements are located differently in the expansion area (and sometimes serve other hydrological functions) the regulations designating these elements would need to reflect the geographic and environmental differences present in the western portion of the Bay watershed. For example, current RMA definitions used in Tidewater would capture most of the land in the proposed expansion area. In order to provide localities in that area with some flexibility in developing their programs, the CBLAD report suggests that the RMA definition would have to be changed. Also, the report notes that because run-off in a karst environment seeps through the ground and into a river or ground water aquifer without passing through an established buffer, CBLAD needs to develop a method to treat such water that serves the same function as the buffer serves elsewhere.

It appears to be CBLAD's contention in the report that most of the performance criteria will be left in place, with some adjustments as a result of the department's adoption of new regulations in March 2002. The report identifies the erosion and sediment control (E&S) and septic tank pump-out requirements as the performance criteria likely to undergo the largest revisions. The provisions governing agriculture and silviculture activities may also need some adjustments.

CBLAD Report's Discussion of Potential Benefits

CBLAD's report concludes that an expansion of Bay Act coverage to the western watershed localities would provide environmental benefits, although these are not quantified. That is, the report does not attempt to estimate the magnitude of the reductions in the levels of pollutants, or quantify the improvements in desirable conditions for aquatic life, that might stem from the expansion.

Instead, CBLAD's primary approach to the question is to qualitatively identify the potential benefits that would stem from anticipated local responses to program performance criteria. The report focuses on the potential improvements in environmental protection practices that would occur at the local level in response to the mandatory imposition of the Bay Act's performance criteria upon localities in the western watershed. The decision to focus on changes in local level responses was based in part on advice provided by the Department of Planning and Budget (DPB).

Exhibit 8 summarizes the ways in which CBLAD foresees that an extension of the Act would lead to water quality benefits. These benefits would accrue due to the increasingly environmentally-sensitive planning and land management activities that would be fostered and/or mandated under the coverage of the Bay Act program. The anticipated end result of this planning and improved land use is enhanced water quality, due to reductions in nutrients, sediments, and other pollutants as compared to a course of no action.

CBLAD Report's Discussion of the Impact on CBLAD Staffing and the Need for State Implementation Grant Funds to Local Governments

At the 2001 General Assembly Session, a fiscal impact statement was developed by the Department of Planning and Budget, in consultation with CBLAD, for Senate Bill (SB) 821. This bill, which did not pass, would have required the expansion of the Bay Act to the localities of the western watershed. Building upon this fiscal impact analysis that had been developed for SB 821, the CBLAD report provides an assessment of the financial costs to the State to expand the Bay Act into the western portion of the Bay Watershed. The CBLAD report states that in general, the methodology for determining these increased costs involved "extrapolating current program costs by a percentage factor relating to the increase in work demands."

CBLAD estimated that initial start-up costs for the expansion could be fairly small, at about \$407,100 to \$578,715 per year for the first two years. This cost would be to employ five professional staff, to obtain temporary office space in the western region, and to administer two small pilot programs of \$50,000 each (local assistance and agricultural grant program pilots).

However, the sustained annual cost of the expansion, after initial start-up, is estimated in the report to be about \$2.44 million per year. To operate the program beyond the first two years, CBLAD envisions the need for a new field office

Exhibit 8

Benefits Anticipated by CBLAD Report Due to Mandatory Imposition of the Bay Act's Performance Criteria

- **Benefits from a Lower Threshold for Erosion and Sediment Controls** – Whereas most western watershed localities require E&S control compliance for land disturbance at 5,000 square feet or more, CBLAD's regulations lower the threshold to 2,500 square feet in areas designated by the local government as environmentally sensitive.
- **Reductions in Stormwater Run-off and Water Quality Degradation Due to Stormwater Management Regulations** – CBLAD regulations would require localities to establish minimum standards for stormwater runoff and employ best management practices to reduce runoff.
- **Reductions in Nutrient, Bacterial, and Toxic Pollution from Sewage Discharges Due to CBLAD's Septic System Pumping Strategy** – CBLAD requires local governments to inventory on-site sewage treatment systems, and mandates septic tank pump-outs every five years (or the use of technological devices to identify potential system failures).
- **Reduction in the Amount of Nitrogen, Phosphorus, Sediment, Bacterial Pollution, and Toxic Chemicals Due to More Farms Applying Environmentally Focused Management Plans** – CBLAD's agricultural assistance program provides support for farm plans, which CBLAD says are more comprehensive than other plans, such as those focusing on nutrient management plans only.
- **Reduction in Waterway Sedimentation Due to Local Governments Having Greater Authority Over Forest Harvesting Activities Under the Act** – Local governments gain authority over forest harvesting (silvicultural) activities in resource protection areas where forestry operations have not followed the best management practices of the Department of Forestry.
- **Reduction in Water Pollution Due to Changes in Land Use Within the 100-Foot Buffer Under CBLAD Regulations** – Under the Bay Act regulations, a 100-foot buffer along perennial streams and tributary waters is designated as a resource protection area (RPA), serving as a filter for runoff flowing to surface waters or as a physical barrier to the water body.
- **Increased Water Protection Due to Performance Criteria and Environmental Impact Evaluations** – An expansion would require the western watershed localities to implement minimum landscaping criteria, establish impervious cover standards, and review development plans to avoid unnecessary land disturbance.
- **Promotion of Water Quality Protection Due to Increased Review of Local Development Planning** – Bay Act regulations require local comprehensive plans and land use ordinances to address water quality.

Source: JLARC staff analysis of Chapter IV from the CBLAD report.

(probably in Staunton or Harrisonburg), the hiring of 15 additional employees, and increased local assistance and agriculture grant funds. Specifically, CBLAD's estimate of the annual costs after the initial start-up includes:

- about \$844,000 to pay for 15 added staff positions, to develop new State regulations for the western localities, to review their comprehensive

plans and land use ordinances, and to ensure compliance with program requirements;

- about \$50,000 for rent and utilities at the field office;
- about \$797,500 for local assistance grants; and
- about \$750,000 for agricultural grants.

CBLAD staff have indicated that the localities in the western watershed are farther along in their use of the comprehensive plans and local ordinances than the Tidewater localities were when the Bay Act was implemented. This may help reduce the need for funds.

CBLAD Report's Discussion of Local-Level Costs and Effects

The language of the mandate for the CBLAD study, HJR 622, provides that the report is to assess the "benefits to the environment, along with the costs and effects to state and local governments of extending the Act." It is not clear from the language whether the word "costs" is to be: (1) juxtaposed against the concept of "benefits to the environment," therefore suggesting that all costs should be considered, including costs to local developers and property owners, or (2) attached with the word "effects," and therefore only applying to those costs specifically incurred by State and local governments.

In its report, CBLAD does not attempt to estimate a range in the total costs for local developers and property owners, and it also does not quantify the costs expected for local governments. In indicating that no measurement of the costs to local government was attempted, CBLAD staff note that DPB's fiscal impact analysis from August 2000 found that in addition to a lack of information to determine the environmental benefits of the Bay Act's regulatory schedule, it also was not feasible at this time to estimate the costs of compliance by the local governments.

CBLAD's report, then, focuses upon a qualitative discussion of the potential effects upon local government. The report indicates that broad generalizations are not possible regarding these effects, reaching a conclusion that:

There is no definitive statement that can be made with respect to the effect upon local government if the Chesapeake Bay Preservation Act is extended to the balance of the Watershed... the effect upon an individual locality is dependent upon its environmental situation; the amount, type and location of development that is occurring there; the status of its plans and codes; the expertise that the locality has on staff; and other factors.

The report comments that what can be definitively stated is that in the program experience in the Tidewater region, compliance with the Act "has not created any adverse effect to local government that could not be accommodated or overcome."

CBLAD'S REPORT DOES NOT ACKNOWLEDGE KEY LIMITATIONS IN WHAT IS KNOWN ABOUT THE BAY ACT'S EFFECTIVENESS

A central aim of the work done by CBLAB and CBLAD is to use land use planning as a vehicle to reduce nonpoint source loadings to the Bay and other waterways and thereby protect water quality. As previously indicated, key nonpoint source pollutant loads to the Bay include sediments and nutrients.

Studies of various methods or programs for reducing nonpoint source pollutant loads to waterways have been able to show resulting improvements in water quality on a micro-level. For example, studies have shown reductions in the flow of nutrients and water quality improvements within relatively small geographic areas that can be appropriately attributed to efforts to reduce nonpoint source pollution.

However, studies assessing progress across larger geographic scales, such as a county or a watershed, have found the results of nonpoint source pollution efforts to be more variable, with benefits characterized as small or moderate. A lack of documentation establishing large, broad-scale success is a point that can be made about most nonpoint source reduction efforts, and not just Virginia's Chesapeake Bay Act program per se. This is partly because of the diffuse nature of the sources of nonpoint source pollution. Large scale progress in achieving nonpoint source pollution reductions has proven more challenging to date than achieving reductions from point sources. The following statement by a leading environmental scientist addresses this point:

Progress has been made in reducing point source inputs of nutrients through the elimination of polyphosphate detergents and, in areas like the Chesapeake Bay, Tampa Bay, Sarasota Bay, and Moreton Bay (Australia) through advanced wastewater treatment. Significant reductions in nutrient loadings in some European rivers have also resulted from water treatment. In general, though, there is little evidence that efforts to reduce nonpoint source loading have yet been very successful...

This could be a result of the failure to actually implement voluntary programs, less-than-expected effectiveness of the management practices implemented, or lag times for response of the system... (*Comments from a paper entitled "Agriculture and Coastal Eutrophication", presented by Donald F. Boesch at the "Common Ground Summit" from October 2001, a meeting of approximately 20 of the nation's leading experts on agricultural nutrient dynamics and nonpoint source controls*)

Within the context of the difficulty of achieving and demonstrating successes in water quality efforts directed at nonpoint sources, it appears to be particularly unrealistic to expect to prove at this time that Virginia's Bay Act program has had a considerable impact in improving water quality throughout Tidewater Virginia. As indicated in a prior chapter of this report, program implementation is still relatively new. A number of localities have only recently developed programs that,

at least on paper, are considered fully consistent with the intent of the Act. CBLAB and CBLAD are only now moving toward an emphasis upon seeing that the Act is effectively enforced.

Nonetheless, the CBLAD report on the western expansion seeks to assert that the program itself has already proven to be effective in Tidewater Virginia. This assertion is based on a weak comparison regarding the percentage of stream miles that were rated as impaired in Tidewater versus the percentage rated as impaired in other parts of the State.

Instead of this assertion, CBLAD's report should have acknowledged the current lack of information to establish program effectiveness at a macro-level. The report could have indicated that the project CBLAD administers that was established to help assess the effectiveness of the program -- the Polecat Creek Monitoring Project -- has not yet provided any conclusive results, and its future funding is uncertain. The report could have indicated the potential future significance of the Polecat Creek Project as one indication of whether or not Bay Act measures serve to protect water quality. Further, the report could also have given additional attention to the demonstrated efficacy of some of the measures advanced by the Act. Some of these measures, such as the use of a buffer zone, have been shown to be effective when implemented and maintained over time.

The CBLAD Report Does Not Provide Any Compelling Information to Support the Claim of Already-Proven Bay Act Effectiveness in Tidewater

There is little or no disagreement with the points CBLAD makes in its report that the expansion of Bay Act program coverage would bring about certain increments of change in local behaviors in the western part of the watershed, and that these changes would have the effect of bringing about some nonpoint source pollution improvements. The CBLAD report poses a broader and more difficult question in the executive summary, however, stating that:

The question is not whether there is a benefit to the environment of expanding the current Bay program but whether doing so is an effective, efficient, and an appropriate way to protect and enhance the quality of state waters.

The CBLAD report attempts to make a case that the program is an effective, efficient, and appropriate way to achieve water quality goals through a comparison of certain data from Tidewater and other parts of the State. Specifically, the report compares the proportion of stream miles in the State that are rated as impaired and are located in Tidewater compared to the proportion of stream miles that are rated as impaired in the rest of the State. In the executive summary, CBLAD staff provide a graphic (see Appendix C to this JLARC report) that shows that only six percent of the stream miles in Virginia that were rated by the State as "impaired" were in Tidewater, based on a CBLAD staff analysis of data from Virginia's 1998 303(d) report. CBLAD's graphic also shows that 51 percent of the "impaired" stream miles are in the potential watershed expansion area, and 43 percent of the impaired stream miles are outside the Bay watershed. The report then states that a

perspective on the program's effectiveness, efficiency, and appropriateness is illustrated by the fact that:

within the Tidewater Virginia area, the number of miles of impaired streams is dramatically less than in the balance of the watershed (the proposed expansion area) or outside the watershed. This fact is even more startling when viewed in concert with [information] that shows 2/3rds of the population lives in Tidewater while it has only 1/4th of the land area.

However, there are several problems with viewing the data presented by the report as conclusive on this point. First, the report does not present any data showing whether there are differences in the percentages of the stream miles that are within the regions that CBLAD addresses. A higher percentage of stream miles means that a higher percentage of miles are available for contamination. It is unclear from the report how many stream miles are in these different regions, and therefore whether or not this issue presents a problem for making comparisons.

Second, there is a lack of appropriate baseline data to assess how the proportion of impaired stream miles compared at a point in time before CBLAD's activities began. It could be that the relative impairments today are not much different than historical differences.

Third, and perhaps most importantly, the prevalent land uses and sources of pollution are different within the regions. Among the prevalent land uses in the proposed expansion area are intensive agriculture uses, including livestock operations. The CBLAD report appropriately acknowledges that livestock operations will pose a challenge for expansion of the program to the westward part of the watershed. The report indicates that according to the 1997 Agricultural Census, there are 2.5 times more farms, 7.5 times more beef cattle, 11 times more dairies, and 3.8 times more poultry farms in the western expansion area than in Tidewater. However, the report does not indicate that this same point may be relevant to partly explaining the higher percentage of impaired steam mileage in the expansion area. The CBLAD report does not recognize that this issue seriously compromises the ability to use a simple comparison of impaired stream miles to draw conclusions about the effectiveness of the Bay Act.

A substantial portion of the stream mileage in the western part of the State appears to be rated as impaired due to agriculture uses, and particularly livestock operations. The cause of impairment in many cases is fecal coliform bacteria. These bacteria live in the intestines of warm-blooded animals. A publication of the United States Geological Survey (USGS) notes that the "the presence of these bacteria in water is indicative of contamination by fecal matter", and that "sources of these bacteria include animal manure, wastewater-treatment plants, and septic tanks." It should also be noted that these bacteria are more likely to thrive in the upper, fresh water portions of a river basin, as salinity in the water tends to kill these organisms. Virginia's *Water Quality Assessment 305 (b) Report* from August 2000 states that:

In general, fecal coliform bacteria exceedances are the leading cause of nonsupport or partial support of designated uses in rivers and streams. Agricultural practices appear to be one of the primary sources causing the loss of designated use support. Indications are present that uncontrolled agricultural and pasture land use results in much of the fecal coliform bacteria and nutrient contamination in Virginia's waters.

The 305 (b) report goes on to note that urban runoff and municipal and industrial dischargers, and even naturally occurring wildlife are contributors to impairment, but the strong role of agricultural practices is particularly noted.

Fourth, and finally, implementation of the Bay Act Program, as indicated in Chapter II of this JLARC report, has been slow and resources limited. CBLAD has not closely monitored local Bay Act program implementation, and therefore the extent of the application of its regulations is unknown. The department is developing its first comprehensive local oversight program designed to monitor local implementation and enforcement and hopes to begin these reviews in the fall. In addition, while the department funded an agricultural program to assist farmers in developing farm use plans to minimize nutrient runoff and soil erosion, development of these plans has been slow and State oversight of these programs is negligible. It seems unlikely that a program which is still working on comprehensive implementation can be credited with achieving a wide difference in the amount of water quality impairment in Tidewater versus the western watershed.

In discussions with JLARC staff, CBLAD staff have indicated that the stream impairment data and graphic were not relied upon to make key points in the document. However, these data and the graphic, shown in the executive summary and in the benefits chapter of the report, are the only evidence offered in the report in support of the following claim by CBLAD:

Given that the myriad of state-based environmental programs are applied state-wide and the current Chesapeake Bay Act program applies exclusively to Tidewater Virginia, it appears that during its twelve years of existence, it [the Bay program] has had a disproportionate and positive effect upon protecting and enhancing the quality of state waters.

Similarly, the CBLAD report makes a number of other statements about the success or proven nature of the program that may be true, but which are not adequately documented in the report. Examples of these statements include:

The value of water quality planning is already established in the Commonwealth.

* * *

The results in localities that do good environmentally-based planning show in the enhanced environmental quality of their communities.

* * *

...it seems that an expansion of the Act and its requirements for water quality planning at the local level with state assistance offers a proven way to make the overall state effort more efficient and effective.

CBLAD's Polecat Creek Monitoring Project Has Potential as an Indicator of Water Quality Protection Under the Bay Act, But Its Future Is Uncertain

In order to assess the effectiveness of the Bay Act regulations in preventing the increase of nonpoint source pollution in a watershed, CBLAD established the Polecat Creek project in 1993. Located in Caroline County, the site was chosen for the environmental quality and rural nature, and for the development that was expected to occur within the decade.

In interviews, CBLAD staff indicate that assessments of water chemistry and fish and aquatic macro-invertebrate communities have revealed no significant differences over time in the water quality of Polecat Creek during the past six years. However, CBLAD staff also state that development to date in the watershed has been much slower than anticipated, so the fact that water quality has not worsened does not serve to demonstrate the success of Bay Act programs in the area. Therefore the study has not yet produced evidence that Bay Act activities have helped to prevent increases in nutrient and sediment pollution, and data from the project are not used in the CBLAD report. These issues are not described in the CBLAD report, however.

It appears that CBLAD's report should have noted that the lack of meaningful results to date from Polecat Creek is one of the factors contributing to a lack of good indicators at this time regarding the Act's effectiveness. The report also could have noted that substantial effort has been undertaken to obtain baseline data at the monitoring stations of this project. These data may be useful in the longer-term for assessing the Act's effectiveness, if the project is continued.

CBLAD's Report Could Have Focused More on the Demonstrated Effectiveness of Buffer Zones and Other Bay Act Practices

While it is premature to conclude that the Bay Act per se has proven to be effective in Tidewater, there is strong evidence that some of the practices that are to be applied under the Bay Act have proven effective under various conditions in field studies across the nation. On this basis, there is reason to anticipate that a carefully designed program, ensuring the implementation and appropriate maintenance of such practices over time, will attain water quality improvements.

The 100-foot buffer requirement of the Bay Act is a leading example of this point. At this time, hundreds of studies have been done on the impact of vegetative and forest buffers on water quality. As indicated in Chapter II of this report, these studies lead to the conclusion that buffers can be a very effective means for reducing runoff. Also as indicated in Chapter II, the 100-foot buffer zone that is used in the

Bay Act is within the typical range that is described as effective in the scientific literature, and it is toward the end of the typical range that affords a high level of protection. The coastal plain in Virginia, where buffers are already called for under the Act, is rated by experts to be the portion of the State where streams will most often benefit from the presence of buffers, because the relatively flat, gentle topography gives buffers the greatest opportunity to trap sediments and other materials. However, experts also believe that there are opportunities for buffers to protect streams in other parts of Virginia as well.

There are also some cautions in the literature regarding reliance upon buffers for water quality protections, however, and these need to be recognized. For example, deep sub-surface flows bypass buffers, making them less effective. Buffers can be rendered less effective in areas with substantial slope, and any areas where surface flows become concentrated and run through the buffer in channels. In addition, buffers must be well-managed after their establishment in order to maintain effectiveness. The literature also indicates that the long-term effectiveness of buffers in permanently storing contaminants is not particularly well-understood. For example, it is possible that some soils will eventually become saturated with nitrogen, and cease to remove it. Some research has suggested that grass buffers may only trap phosphorus on a temporary basis, with its eventual release during later storms.

These issues notwithstanding, a strong point in the case that the Bay Act has the potential to be effective is that there is a scientific consensus that the use of buffers can be very effective in promoting water quality, and this is a key component of the Bay Act program. Buffers, according to the literature, can often be recommended to promote water quality. There is reason to anticipate that land use planning, with buffer zone requirements where appropriate, may lead to water quality improvements, if the buffers are implemented and maintained. The premise that large-scale nonpoint source reductions can be achieved through the use of practices that have proven effective in field studies is a premise that is used in the Chesapeake Bay program model for estimating nutrient reductions. It is also a premise that the Commonwealth and its Bay program partners have implicitly followed in committing over the years to various goals and efforts to reduce nonpoint source pollution under Chesapeake Bay Agreements. Effective implementation of efforts directed at nonpoint source pollutants appears to be an important factor impacting the results, however, so large-scale success is not easily achieved.

CBLAD'S REPORT COULD GO FURTHER TO ADDRESS SOME INFORMATION GAPS

JLARC staff concur with the CBLAD report's indications that the health of the Chesapeake Bay and its tributaries would likely benefit from the land use planning approach found in CBLAD regulations. The approach that CBLAD fosters can be – under the right conditions and circumstances – an effective and efficient way to protect water quality. As a piece of a larger effort, the expansion of the program could assist in minimizing nutrient and sediment influxes to waterways.

However, the magnitude of the benefits or the costs that might be anticipated in the western part of the watershed is open to question. The CBLAD report does not resolve these questions. As previously noted, the report does not attempt to quantify the magnitude of benefits or costs that may be incurred through a western expansion of the Bay Act program.

A judgment made by CBLAD staff in planning their report – that it is not feasible at this time to fully and accurately quantify all of the costs and benefits of the program -- appears to be appropriate, given the uncertainties that are involved. However, it appears that the CBLAD report could have gone further in supplying information about the likely benefits and costs that it foresees for some components of an expansion, based on optimistic and more pessimistic assumptions. In addition, the report does not adequately address the potential redundancy of the Bay Act programs with other water quality programs, particularly with regard to agricultural issues.

Many localities in the western part of the watershed are uncertain as to the efficacy of bringing Bay Act water protection programs to the area. The lack of more specific information about the proven impacts of the program in the Tidewater region, as well as a lack of information about the magnitude of environmental benefits and local-level costs in the western region, pose problems from a policy decision-making perspective. For example, some localities sympathetic to the idea that more local water quality protection measures may be desirable appear to still be in doubt that the extension of the Bay Act program is the best means to achieve those ends. The lack of information about the magnitude of anticipated benefits or costs may continue to be a factor that tends to promote caution in State and local policy-maker responses to the issue of expanding the coverage of the Act.

Fully and Accurately Quantifying Benefits and Costs of an Expansion Is Not Feasible Now, But Impacts of Some BMPs Might Have Been Quantified

In the study framework section of its report, CBLAD staff appropriately recognizes the complexity and the difficulty of meeting the charge given by HJR 622, to assess the benefits and costs of expanding Bay Act program coverage. In considering that charge, CBLAD ultimately concludes in the report that “it is impossible to aggregate the effects of application of the Act upon 104 additional units of government and the geographic areas they encompass.”

In reaching this conclusion, CBLAD was influenced by the Department of Planning and Budget. Recently, DPB had reviewed CBLAD’s proposed revisions to the regulations for the Tidewater area, and developed a regulatory impact statement. In that statement, DPB staff argued that estimating the impacts of the regulatory revisions would be “quite speculative”, and that each step in such an analysis would be “subject to uncertainty.” The CBLAD report quotes the conclusion reached by DPB in its analysis:

We are led to the conclusion that too little is known to estimate how much of a reduction in non-point emissions will result from

the implementation of this regulation. Nor do we have the data necessary to estimate the costs of compliance.

The CBLAD report does not disagree with DPB's conclusion regarding its regulations. The report in fact builds upon this conclusion, indicating that if anything, the impacts of the expansion are more general (and therefore more uncertain) than the impacts of the revised regulations for Tidewater. The CBLAD report does not attempt to estimate the benefits of the expansion. The report further says that "there is no definitive statement that can be made with respect to the effect upon local governments if the [Bay Act] is extended to the balance of the Watershed." The report does not attempt to estimate the costs to local government of an expansion, then, either.

According to CBLAD staff, DPB staff suggested that CBLAD meet the HJR 622 mandate to assess benefits by comparing current water protection and development planning practices in the western expansion area versus what would be required if the Bay Act were expanded. CBLAD staff decided to use this approach, which the report calls an incremental change analysis.

Thus, CBLAD made a judgment, with DPB's advice, that fully and accurately quantifying all of the costs and benefits of the Bay Act program expansion was not feasible at this time. This judgment appears to be correct. The Bay Act Program, as administered by CBLAD, involves a land use management approach that includes the use of best management practices. The impact of CBLAD's land use planning activities upon development activities, and the resulting costs and benefits from those activities, is likely to be particularly complex and very difficult to quantify.

On the other hand, the impact of the Act extends beyond the potential impact of the program upon development activity. In the CBLAD report, the anticipated "increments of change" that are noted in land use activity is often the adoption of various practices to manage runoff. DEQ, DCR, and CBLAD products have developed estimates of the costs and impacts of nonpoint source pollution reduction efforts in other forums in the past, such as in tributary strategy plans. The Potomac Basin tributary strategy, for example, indicates the type and quantity of best management practices that are anticipated, the estimated unit and total estimated costs of applying these methods, the estimated benefits in the form of quantified reductions of nutrients and sediments that are expected from those strategies, and the estimated reduction efficiencies of the measures.

Whether the tributary strategy documents use realistic assumptions about the benefits and costs of nonpoint source pollution measures is an issue that can be debated. However, considering the work that has been done on tributary strategies, it appears that it may have been feasible for CBLAD to attempt to quantify a portion of the benefit and cost issues. That is, it could probably have estimated a likely range in the costs for BMPs under the program, and the amount of difference that it believes that the program's BMPs might make in nutrient loads, sediment loads, or general water quality. For those measures or items that can be quantified, optimistic and more pessimistic assumptions about the effectiveness and costs of the meas-

ures could have been utilized to show a range in the likely costs and benefits. While the CBLAD report does note that the Natural Resource Conservation Service has estimated that the BMPs typically required for livestock operations have a cost of about \$3,520 per farm (annually), the report otherwise does not discuss cost figures for the land use practices that would be needed.

CBLAD's Report Does Not Adequately Address the Potential Redundancy of Bay Act Programs With Other Water Quality Programs

In addition to the Bay Act, the State now operates several other programs designed to protect water quality. Programs such as the State's tributary strategies and Total Maximum Daily Loads (TMDL) have as their objectives the reduction of pollution entering the State's waters. Tributary strategies establish specific nutrient and sediment reduction goals for the Bay's tributary streams. Multiple entities are involved in writing farm plans at varying levels of comprehensiveness. Considering these and other programs, localities in the proposed expansion area have expressed concerns about perceived redundancies in current State water quality protection policies and the financial impact of implementing the Bay Act. While the CBLAD report cites this local concern, the report does not express CBLAD's views on the magnitude of this issue and how the agency might address the concern as a part of its strategy for the expansion.

The Lack of Information on the Likely Impacts of Westward Program Expansion Poses Problems from a Policy Decision-Making Perspective

It is understandable that CBLAD regards the task of fully and accurately quantifying the costs and benefits of expanding the program as beyond the State's capacity at this time. Further, CBLAD will never be in a position, in advance of implementation, to show how well the program will work in each and every locality.

However, CBLAD should consider whether it can provide more information to the localities in the westward part of the watershed, and to State policy-makers. At a minimum, it appears that CBLAD should make more information available regarding two points that relate to the uniqueness of the western expansion area. First, CBLAD should elaborate further on the point contained in its report that:

there will be difficulty in applying current RPA and RMA criteria, and hence designations, in the western area due to the steep slope topography, the karst topography, the character of streams, and the character of isolated wetlands along with the fact that most of the Tidewater criteria, e.g. tidal shores, etc. don't apply.

The report states that a stakeholder process will be used to obtain input, but it does not indicate what other information might be available to help guide the resolution of these important issues. CBLAD needs to indicate what scientifically-based, objective information would likely: (1) guide these designations, and (2) influence the manner in which these designations would likely differ from Tidewater.

Second, for major program components, such as the threshold standard for earth disturbance and the buffer requirement, CBLAD should elaborate on whether the Bay Act program would likely establish a single fixed distance standard or threshold in the western part of the watershed, or whether the program would likely make the standards variable depending on conditions.

CBLAD should make more comprehensive information available describing the types of factors that typically impact the relative success of practices, such as erosion and sediment controls for earth disturbance and the use of buffers, in protecting water quality. This type of information would aid localities in considering whether the factors that tend to promote success are or are not prevalent in their locality. Further, the department should consider providing information similar to that already provided in tributary strategy documents regarding the amount of increase in BMP usage that might be envisioned under the Bay Act Program expansion, compliance costs associated with that usage, and the reduction in the flow of nutrients and sediments (or improvements in water quality) that CBLAD believes could be achieved through these BMPs.

A JLARC survey of county administrators and city and town managers indicates that there is neither uniform support nor opposition in the western portion of the watershed regarding the expansion of the Bay Act programs (see Table 15). A majority of the respondents, for example, think "more actions by local governments are needed to address water quality issues in Virginia." Seventy percent of respondents agreed with this statement.

However, there is some skepticism as to whether or not the westward expansion of the Bay program will be beneficial to water quality. Regarding the question of whether the expansion of the program westward would "be beneficial to water quality in our locality and in the Chesapeake Bay", about one-third said yes, but one-third disagreed, and an equally large group of about one-third reported "no opinion." Further, the largest group of respondents (57 percent) indicated that the position of their local government on the westward expansion is currently unclear.

It appears that a key reason for such uncertainty in the reported opinions may be reflected in the fact that respondents by a wide margin do not think that there is a high level of understanding about how the Bay Act program would impact their localities. Seventy-six percent of respondents disagreed with a statement that their locality has a high level of understanding regarding the impact that extending the Act would have upon them. Under the current situation, it appears that the localities in the western part of the watershed still want and need additional information about the likely positive and negative impacts of the program given the nature of prevailing land uses in their locality. If no additional information can be supplied, a course of inaction may persist, by default, even after a point in time that the State and local fiscal situations improve.

Table 15					
“Western” Locality Perspectives Related to the Expansion of Bay Act Program Coverage in Virginia					
Survey Item	Percentage of Respondents Reporting				
	Strongly Agree	Agree	Disagree	Strongly Disagree	Unclear or No Opinion
More actions by local governments are needed to address water quality issues in Virginia.	11	59	8	1	20
My locality tends to think that the westward expansion of the Bay Act would be beneficial to water quality in our locality and in the Chesapeake Bay.	0	33	26	7	34
This local government supports expanding the requirements of the Bay Act to the localities in the Chesapeake Bay watershed that are not already subject to the Act.	0	11	16	16	57
In my locality, there is a high level of understanding about how participation in the Bay Act program would likely impact our locality.	0	14	52	24	10

Note: The number of respondents for the questions above were 71, 70, 70, and 71, respectively.

Source: JLARC staff analysis of JLARC western locality survey, summer 2002.

**THE STATE MAY WISH TO POSTPONE A MANDATORY EXPANSION,
AT LEAST IN THE SHORT-TERM**

There are a number of policy options for addressing the issue of expanding the Bay program to the western part of the watershed. These options include:

- (1) Rejecting the promotion of a western expansion of the program by the State in any way, or
- (2) Adopting the proposal contained in the CBLAD report, which adds to the coverage area of the Bay Act those localities that are part of a planning district commission that already has localities participating under the Bay Act, plus provides that most of the localities in the western watershed be covered by an adapted program, through a Bay Rivers Act, or

- (3) Expanding the program by only adding those localities which already are part of a planning district commission that participates in the program, or
- (4) Postponing a mandatory or statutory expansion of the program, while enabling CBLAD staff to work with those localities in the western watershed which are interested in developing land use planning activities similar to those entailed under the Bay Act.

Alternatives Involving No Expansion Effort or a Nearly 100 Percent Expansion Effort (Options 1 and 2) Raise Some Concerns

The first two options address the opposite ends of the policy continuum for this issue: the course of opting for no State activity directed toward an expansion, or the course of bringing almost all of the western part of the watershed under the program via the mandatory terms of a statutory Act.

The concern about opting for no State activity directed toward an expansion of the program is that an expansion of the program, with a well-thought out set of regulations, would likely have a positive impact on the health of tributary and Bay waters. Although the CBLAD report has shortcomings, it does make a case that an opportunity to achieve improvements in water quality may be lost if the State does not pursue a program in the western part of the watershed.

The planning perspective advanced by the program is a unique aspect of the program within Virginia's set of nonpoint source control techniques, and it could assist the State in attempts to maintain a cap on the nutrient and sediment inputs to waterways. The 2000 Bay Agreement does not clearly require that the participating states employ land use management practices throughout the watershed. However, it encourages "all citizens of the Chesapeake Bay watershed to work toward a shared vision", and the agreement's vision includes the employment of sound land use management practices. An expansion would be a very responsive action to help reach Virginia's goals as a committed partner in the Chesapeake Bay Program, and address the concern stated in the 1987 *Chesapeake Bay Agreement* and repeated in *Chesapeake 2000* that population growth, associated development, and environmental degradation are clearly correlated.

Virginia's population is expected to grow to almost 6.5 million in the Chesapeake Bay Basin by the year 2020, a 19 percent increase over the estimated 2000 population level of more than 5.4 million. The population rise is expected to occur in the Shenandoah Valley and the area west of the Washington D.C. metropolitan area with unprecedented levels of development for that region. Examples of projected growth in that time frame in the western portion of the Bay watershed include population increases of 40 percent in Loudoun County, 32 percent in Greene County, and 32 percent in Frederick County.

As more urban centers develop in the western portion of the watershed, non-agricultural activities will increasingly account for a larger share of the non-point source pollution that is seen in the tributaries of the area. These potential

threats to water quality could possibly be mitigated by application of Bay Act-prescribed methods.

On the other hand, there are also substantial concerns about whether this is an appropriate time to contemplate the mandatory expansion of a program to almost all of the localities in the westward part of the watershed. Local government representatives and others in the western part of the watershed have raised legitimate questions about the magnitude of the benefits and the costs that they can anticipate if they participate in the program. CBLAD, through its report on the westward expansion, does not yet indicate that it is in a position to respond very effectively to these inquiries.

Also, the progress that has been made in implementing the Bay Act program in the Tidewater area has been slow. Compliance review work has not yet started. The level of program enforcement, as indicated in a previous chapter, has been questionable, and the level of program activity has challenged the capacity of CBLAD's resources. For example, while noting that its revised regulations may speed the process somewhat, CBLAD's report notes that:

Progress in producing [farm] plans to cover the entire area subject to the Act is relatively slow. The progress is dependent upon funding... at current funding and production levels, the current task would not be complete until around 2025.

These factors alone – the current level of uncertainty about the desirability of the expansion on the part of the localities to be brought into the program, the lack of good information at this time to respond to those concerns, and the extent that CBLAD already seems to be challenged within its resource levels to get the program fully implemented in Tidewater -- all indicate that this may not be an advantageous time to pursue a mandatory expansion throughout the western part of the watershed. This conclusion is further reinforced by recognizing the State's current fiscal situation. CBLAD's report, developed prior to the more recent worsening of the State's budget situation, stated that "the key to having any possibility of acceptance [by localities in the westward area] is the providing of resources (funds, assistance, manpower) to accomplish its [the expansion's] implementation."

The State's ability to provide that kind of resource support is clearly questionable at this time. For these reasons, it appears appropriate for the State to postpone taking action to bring a mandatory expansion of the program to almost all localities in the westward expansion area.

The State Could Consider Limited Actions to Promote Land Management Activities in the Western Part of the Watershed (Options 3 or 4)

Given present circumstances, the State may wish to pursue a limited course of action with regard to the expansion of the program, at least in the short-term. For example, the State could take action just to increase the definition of Tidewater Virginia to include the 13 localities that are in planning district commissions that already have members under the Act. Currently, the exclusion of some jurisdictions

from the statutory definition of Tidewater is questionable. For example, the cities of Manassas and Manassas Park are not included in the definition, although geographically they are within the boundaries of Prince William, a county that is part of the Act.

In addition to, or in lieu of that option, the State may wish to address the issue in the short-term by: (a) encouraging CBLAD to make more information available to the western localities about the impact of the program, and (b) encouraging CBLAD (to the extent that it has time and resources available) to work with a smaller subset of localities in the westward watershed who are the most interested in participating voluntarily on the objective of developing local programs that work toward the ends of the Bay Act program. CBLAD offers a technical assistance workshop, for example, to which it could invite localities in the western part of the watershed that are interested in these issues. The *Code of Virginia* allows CBLAD to work with these localities. However, in the past, when CBLAD set aside some funds to do this work, it reports that its budget was then reduced by the amount that had been set aside.

Pursuing a more far-reaching approach than these limited actions would appear to be unrealistic given the State's resource levels and the lack of compelling data to convince reticent localities that their participation would be the best way for them to efficiently and effectively achieve improvements in water quality. On the other hand, a course of no action would likely be a hindrance to the State's progress in seeking to achieve the goal of sound land management practices throughout the watershed, as articulated in Chesapeake Bay Act agreements to which the State has been a signatory partner.

Appendixes

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Appendix A

Study Mandate

HOUSE JOINT RESOLUTION NO. 622 2001 Session

Requesting the Joint Legislative Audit and Review Commission to report on the implementation of the Chesapeake Bay Preservation Act.

WHEREAS, the 1988 General Assembly enacted the Chesapeake Bay Preservation Act, which created the Chesapeake Bay Local Assistance Board and the Chesapeake Bay Local Assistance Department, and empowered the Board to establish criteria that will provide for the protection of water quality in the Tidewater area; and

WHEREAS, in passing the Act, the General Assembly recognized the importance of ensuring appropriate land use and development in certain sensitive areas to preserve and protect the water quality of the Chesapeake Bay and its tributaries (Resource Protection Areas), thereby protecting the health, safety, and welfare of the present and future citizens of the Commonwealth; and

WHEREAS, the Board adopted criteria for protecting and improving the water quality of the Chesapeake Bay and its tributaries through regulations promulgated in October 1989 and subsequently amended in 1991 and 2000; and

WHEREAS, these regulations included requirements governing the designation of areas critical to the preservation and restoration of water quality in the Chesapeake Bay and its tributaries; and

WHEREAS, local governments in the eastern region of the state, known in the statute as "Tidewater Virginia," are charged with incorporating into local ordinances criteria for granting, denying, or modifying requests to rezone, subdivide, use, or develop land that are consistent with the criteria contained in the regulations; and

WHEREAS, local governments have incorporated into local ordinances such criteria; and

WHEREAS, enforcement of the Act has placed a burden on financial and personnel resources of state and local governments; and

WHEREAS, the Chesapeake Bay Preservation Act addresses the impact of land-disturbing activities and commitments made under the regional Chesapeake Bay Program and can only be effective if properly and consistently implemented; and

WHEREAS, legislation to expand the Chesapeake Bay Preservation Act to localities within the western Chesapeake Bay watershed has been proposed at least twice prior to the 2001 Session; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Joint Legislative Audit and Review Commission be requested to report on the implementation of the Chesapeake Bay Preservation Act. The Commission's study shall include (i) an examination of the methodologies and the practices used by the Board in assessing local compliance and in exercising its enforcement authority; (ii) a performance audit of local implementation and local enforcement of ordinances and practices adopted to comply with the Act, including a review and evaluation of information submitted by the Department as well as information obtained directly from localities; (iii) a review of the frequency, consistency, and rationales for local exceptions, variances, or similar decisions; and (iv) an assessment of the current resources, both personnel and financial, necessary for state and local implementation and enforcement of the Act, its regulations, and its local programs; and, be it



RESOLVED FURTHER, That the Chesapeake Bay Local Assistance Department be requested to submit to the Commission for inclusion in Commission's interim report (i) an assessment of the benefits to the environment, along with the costs and effects to state and local governments of extending the Act to include localities outside "Tidewater Virginia" that are within the Chesapeake Bay watershed; (ii) the potential need for changes to existing regulations to reflect differences in the topography and geology for such an expansion; and (iii) the financial resources needed in the form of state implementation grants to local governments for such an expansion. The Department shall complete and submit its findings and recommendations to the Commission by October 20, 2001.

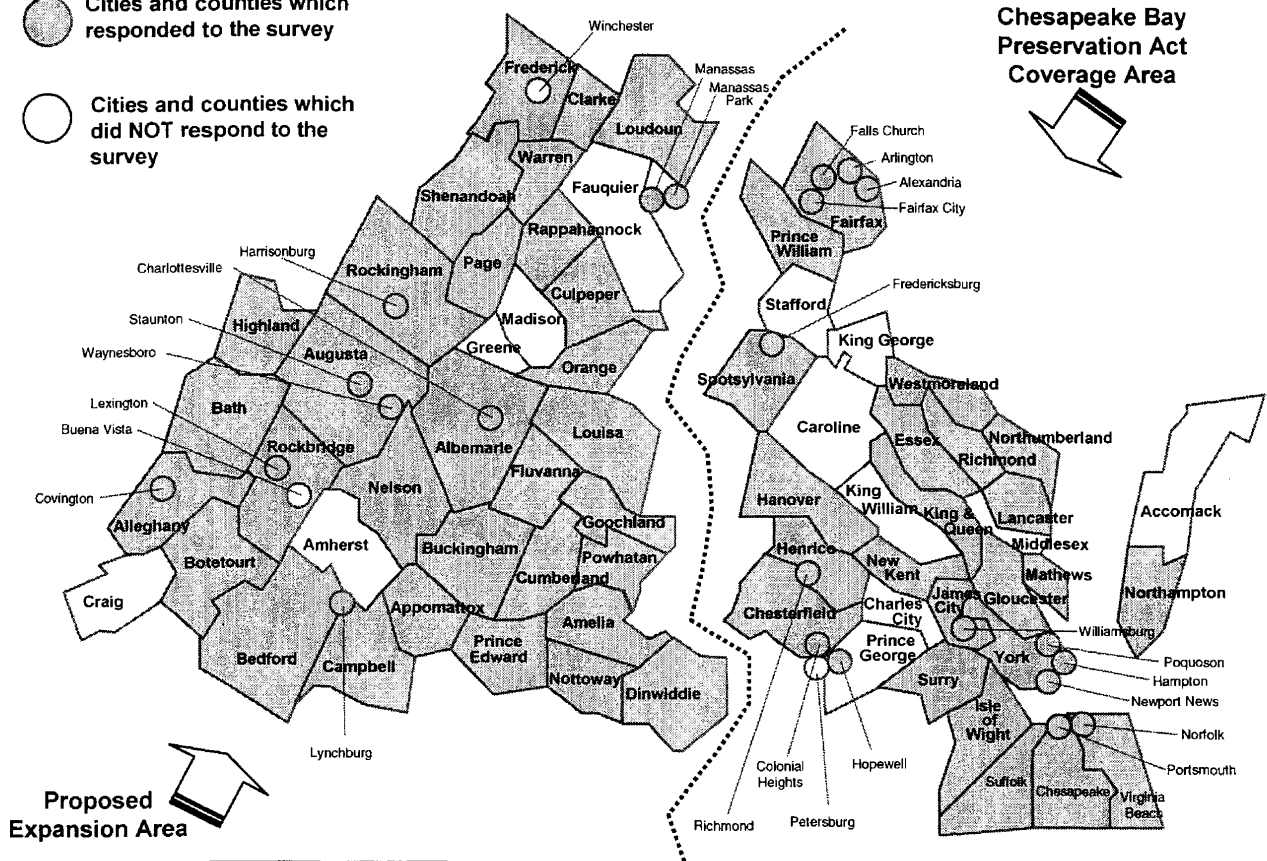
All agencies of the Commonwealth shall provide assistance to the Commission, upon request.

The Joint Legislative Audit and Review Commission shall submit its interim report by November 30, 2001, to the Governor and the 2002 Session of the General Assembly, and shall complete its work in time to submit its final findings and recommendations by October 20, 2002, to the Governor and the 2003 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

Appendix B Response to JLARC Surveys

All localities shown received a survey from the JLARC study team.

-  Cities and counties which responded to the survey
-  Cities and counties which did NOT respond to the survey



TOWNS WHICH RESPONDED TO THE SURVEY

- Towns in Tidewater:**
- | | | |
|---------------|-----------|--------------|
| Bowling Green | Hallwood | Quantico |
| Cape Charles | Irvington | Saxis |
| Cheriton | Montross | Smithfield |
| Dumfries | Onancock | Tappahannock |
| Exmore | Painter | Urbanna |
- Towns in Expansion Area:**
- | | | |
|-------------|--------------|---------------|
| Amherst | Front Royal | Remington |
| Appomattox | Glasgow | Scottsville |
| Berryville | Gordonsville | Shenandoah |
| Boyce | Grottoes | Stanardsville |
| Bridgewater | Hamilton | Stanley |
| Broadway | Leesburg | Stephens City |
| Burkeville | Luray | The Plains |
| Culpeper | Monterey | Warrenton |
| Dillwyn | New Market | Washington |
| Edinburg | Purcellville | Woodstock |
| Farmville | | |

TOWNS WHICH DID NOT RESPOND TO THE SURVEY

- Towns in Tidewater:**
- | | | |
|----------------|------------|-------------|
| Ashland | Herndon | Surry |
| Belle Haven | Kilmarnock | Tangier |
| Bloxom | Melfa | Vienna |
| Claremont | Nassawadox | Warsaw |
| Clifton | Occoquan | West Point |
| Colonial Beach | Onley | White Stone |
| Eastville | Parksley | Windsor |
| Haymarket | Port Royal | |
- Towns in Expansion Area:**
- | | | |
|---------------|----------------|---------------|
| Buchanan | Hillsboro | Mount Jackson |
| Clifton Forge | Iron Gate | New Castle |
| Columbia | Louisa | Orange |
| Craigsville | Lovettsville | Pamplin |
| Crewe | Madison | Round Hill |
| Dayton | Middleburg | Timberville |
| Elkton | Middletown | Toms Brook |
| Fincastle | Mineral | Troutville |
| Goshen | Mount Crawford | |

Appendix C

This Appendix contains a copy of the Executive Summary of *HJR 622 Study, Chesapeake Bay Preservation Act - Expansion*, as prepared by the Chesapeake Bay Local Assistance Department's in November 2001.

A copy of the report in its entirety may be obtained directly from the department or the department's internet web address.

HJR 622 STUDY: CHESAPEAKE BAY PRESERVATION ACT - EXPANSION

RESOLVED FURTHER, That the Chesapeake Bay Local Assistance Department be requested to submit to the Commission for inclusion in Commission's interim report (i) **an assessment of the benefits to the environment, along with the costs and effects to state and local governments of extending the Act to include localities outside of "Tidewater Virginia" that are within the Chesapeake Bay watershed;** (ii) **the potential need for changes to existing regulations to reflect differences in the topography and geology for such an expansion;** and (iii) **the financial resources needed in the form of state implementation grants to local governments for such an expansion.** The Department shall complete and submit its findings and recommendations to the Commission by October 20, 2001.

I. EXECUTIVE SUMMARY

This study was undertaken through a direction of the 2001 General Assembly in the form of HJ 622. The report was prepared by the Chesapeake Bay Local Assistance Department (CBLAD) and presented to the Joint Legislative Audit and Review Commission (JLARC) pursuant to HJ 622. The study and this report address the implications of extending the current Chesapeake Bay Preservation Act, § 10.1-2100 et. seq., and its Regulations to the balance of the Chesapeake Bay Watershed in the Commonwealth of Virginia.

Format and Content: The report consists of six additional chapters to this Executive Summary. The next chapter, Chapter II, sets forth the legislative and regulatory context under which the issue of a proposed expansion arose and must be considered. Of significance, it is pointed out that through the 1987 Bay Agreement, the Commonwealth had made a commitment to apply a Bay Act program throughout the entire Chesapeake Bay Watershed in Virginia.

Chapter III describes the study framework that was used to address the very complex task of identifying and assessing impacts that will occur in the future and which cannot be isolated, i.e. they are a part of a complex system of development and regulations. Of significance is the conclusion that the study is not a typical cost/benefit study since the benefits are discussed as long-term implications for the condition of the environment, particularly the quality of state waters, while the costs relate to the resulting obligations of local and state governmental entities to create and implement the appropriate and necessary programs. To gather input to the study use was made of a locality survey, to assess capacity related to the water quality planning and regulation; seven outreach meetings were held in the proposed Expansion Area; and, an environmental-benefits focus group was used in addition to the basic research of environmental programs and the current Bay Act Program history.

The initial methodology for the study required looking at the overall effect of the water-quality based environmental programs on Virginia's portion of the Bay Watershed through comparison of the Tidewater Area with the proposed Expansion Area. However, operating only with such broad-based information would not be responsive to the directives in HJ 622. Therefore a more detailed methodology that involved identifying the increment of change that would occur between the present situation (the baseline

condition) and the resulting situation once there was an expansion of the Act’s geographic coverage was created. The increment of change was then assessed for its effects in terms of environmental benefit and in terms of costs and allocation of resources. In table form, the columns were identified as:

Bay Act Expansion Study – Incremental Change Analysis			
CURRENT SITUATION {The Baseline Condition}	ACTIONS THAT MAY OCCUR {The Increment of change}	BENEFITS	COSTS AND RESOURCES

The items for which an increment of change was identified are listed in Table III-3. The environmental benefits analysis is contained in Chapter IV; the effects on local government in Chapter V; and costs to the state in Chapter VII. Table III-4 provides an abbreviated, key-word summary of the content of those chapters. The key findings are highlighted in later sections of this Executive Summary.

Study Conclusions: Recognizing that HJ 622 called for the identification of the potential need for changes to the current regulations and identification of financial resources needed for an expansion, in addition to the assessment of environmental benefits and costs to government, the study contains several conclusions and suggestions that when brought together form the essence of a plan, or strategy, for proceeding with an expansion program. Those items are put together in the following outline, are expanded upon in the balance of this Executive Summary, and are addressed in detail in the full report.

- Legislative action to apply the goals, objectives, and programs associated with the Chesapeake Bay Preservation Act throughout the Chesapeake Bay Watershed in the Commonwealth is warranted.
- Any such expansion must be undertaken with consideration of the impact upon the operation of local governments, of the fiscal impacts to the Commonwealth, and with the need to have it fit appropriately within the obligations of the Commonwealth per the Chesapeake Bay 2000 Agreement and in a manner compatible with other environmental and water quality protection programs administered and implemented by the State.
- An expansion accommodated simply through the inclusion of new jurisdictions to the definition of “Tidewater Virginia” in § 10.1-2101 will not be efficient or effective.
- An expansion can effectively be accommodated through two avenues. One aspect is adding 13 of the expansion localities (4 counties, 2 cities, and 7 towns) to the current program, the *Chesapeake Bay Preservation Act*. These localities are within the bounds of planning district (regional) commissions that have localities under the Act. The other aspect involves creating new legislation, such as a *Chesapeake Bay Rivers Act*, for the balance of the expansion area. The new Act would cover 32 counties, 9 cities and 50 towns.

- Upon adoption of new legislation, program development and implementation for the 13 localities added to the current Act would commence immediately and proceed in the same manner as with the original Tidewater localities. For the expansion area, new regulations would need to be created and adopted prior to program development and implementation.
- The new regulations could be created in two separate actions. The first would address the administrative structure and could be tailored after the current program. It would also include the requirements for addressing the protection of the quality of state waters in local comprehensive plans. Early adoption of these regulations would allow localities to proceed with water quality planning efforts while the other aspect of the regulations, that dealing with resource areas and performance criteria, is created and adopted.
- The portion of the new regulations dealing with resource area designations and performance criteria would be developed through a stakeholder process and would specifically address the topology and geology typical to the proposed expansion area. This process would take approximately 18 to 24 months.
- The expansion program could be efficiently and effectively incorporated into the existing CBLAD structure over a two-year period during which both sets of new regulations would be prepared and adopted; and, pilot programs would be applied in the expansion area. The annual additional cost for the phase-in period would be less than \$600,000, of which \$250,000 could be provided through a shift in the priority of other funding sources such as the Bay Program Implementation Grant.
- The long-term additional annual program cost would approximate \$2,500,000. \$700,000 of this amount could be accommodated through other than the general fund given a shift in the priority of other funding sources such as the Bay Program Implementation Grant.

Geographic Area and Units of Government:

There are 109 localities in the Virginia portion of the Chesapeake Bay Watershed that are not under the current Bay Act program. Five counties, however, have a minimal land area, minimal population, and do not have any impaired water bodies. The study suggests that any expansion include only the other 104 units of local government. The jurisdictional breakdown is 36 counties, 11 cities, and 57 towns with an approximate population of 1,389,400 and a land area of approximately 18,700 square miles. Table I-1 provides a comparison of this data between the Tidewater Area and this Expansion Area. Within Chapter III, Table III-2 provides a listing of all counties, cities, towns and their respective planning district, or regional, commission.

In reviewing this data, there are sharp distinctions between the Tidewater Area and the proposed Expansion Area. Roughly, the land area under the Act would triple while the affected population would increase by one-third.

TABLE I-1	Tidewater Area			Expansion Area		
	Number	Population	Land Area sq. mi.	Number	Population	Land Area sq. mi.
Cities	17	1,720,576	1,478	11	282,688	150
Counties	29	2,649,129	8,370	36*	1,106,721	18,551
Towns	38			57		
Local Governments	84	4,369,705	9,848	104*	1,389,409	18,701

* 36 reflects the suggestion that 5 counties that are minimally in the watershed not be included.

To accommodate topographic and geologic matters and to provide for an effective liaison and review program, the study suggests that those localities that are within a planning district commission that is already under the Act be added to the definition of "Tidewater Virginia" contained in § 10.1-2101. These localities are listed in Table I-2. They would be subject to the Act and its Regulations as they exist at the time of expansion and would proceed under the same program development approach that was used for the original Tidewater localities. Table I-3 shows the number and type of localities for the current Act and a new Act.

Table I-2 Potential Localities to be added to the current Chesapeake Bay Act	
PDC/RCs already in the Act	Localities
#15 Richmond Regional PDC	Goochland County, Powhatan County,
#08 Northern Virginia PDC	Loudoun County; Cities of Manassas and Manassas Park; Towns of Hamilton, Hillsboro, Leesburg, Lovettsville, Middleburg, Purcellville, and Round Hill
#19 Crater PDC	Dinwiddie County

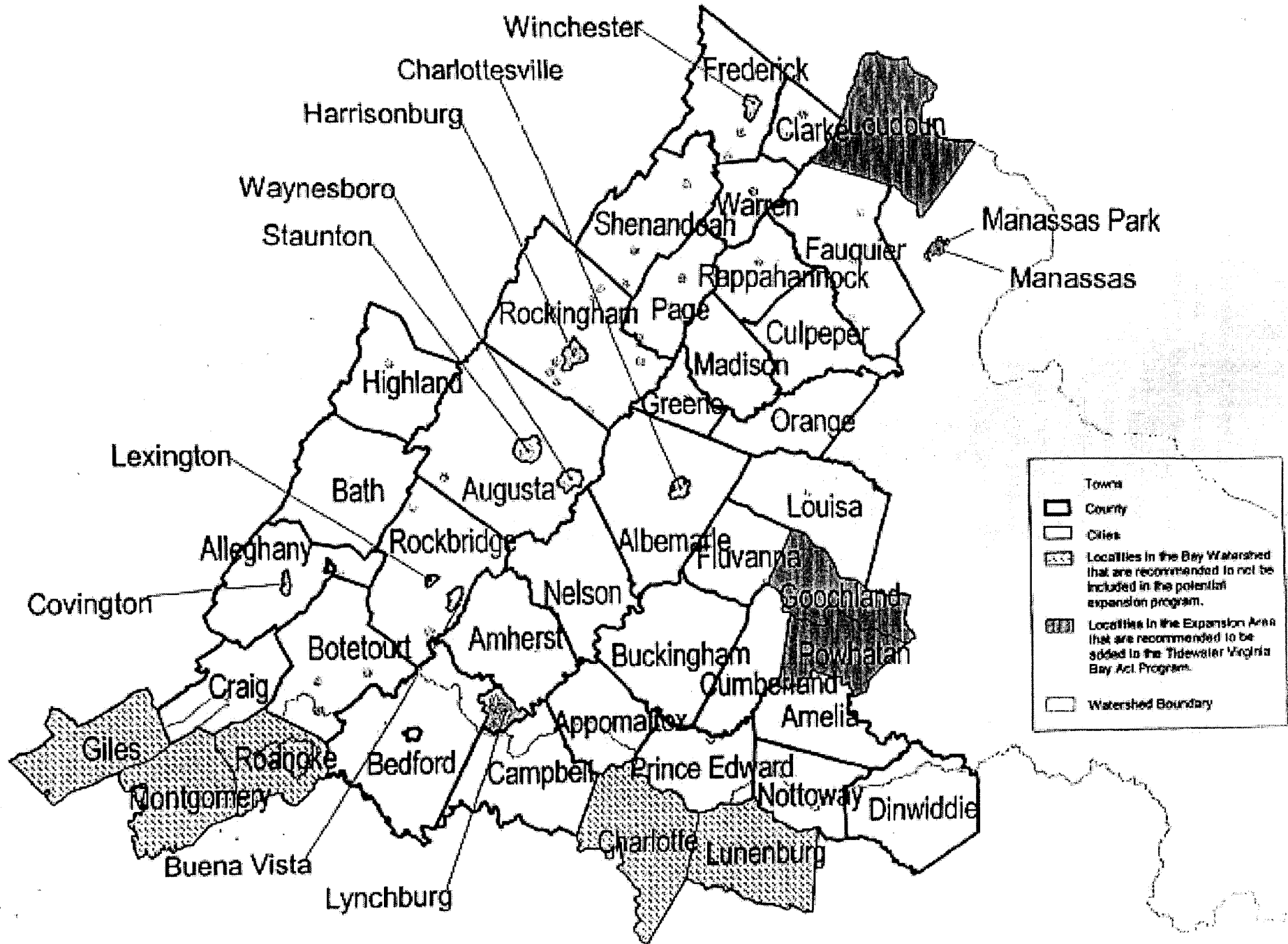
Table I-3 Potential Localities per Existing Act and Expansion Act				
Type of jurisdiction	Current Assignment		Potential Assignment	
	Tidewater	Expansion	Tidewater	Expansion
Counties	29	36	33	32
Cities	17	11	19	9
Towns	38	57	45	50
Totals	84	104	97	91

The ninety-one (91) remaining expansion localities would be included in a new act. The language of the new act could essentially mirror that of the existing act with the exception of its title and the "definition" of the subject localities. The composition of the new Board could be the same at nine (9), thus accommodating the potential for two at-large members.

Figure I-1 is a map showing: the 109 units of government in the watershed but not covered by the current Act, those counties suggested in the report as not to be included, and those localities that are suggested to join others in their planning or regional district under the current Act.

Localities and the Potential Expansion Area

Figure I-1



Figures I-2 and I-3 graphically depict the relationship between the Tidewater Area, the potential expansion area, and the balance of the state with regard to land area and population. Figure I-4 depicts the percentage of miles of impaired streams within those areas. The information in Figure I-4 is addressed in the next section of this report.

FIGURE I-2

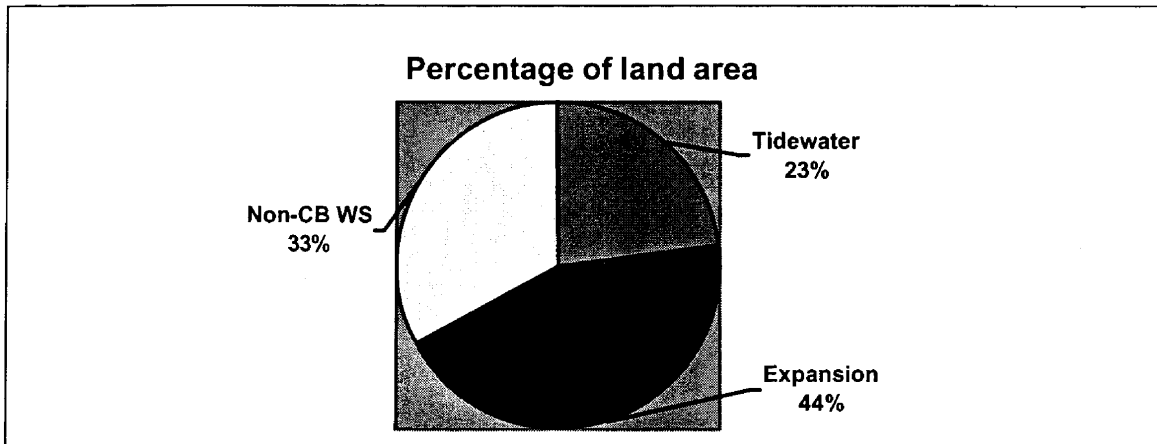


FIGURE I-3

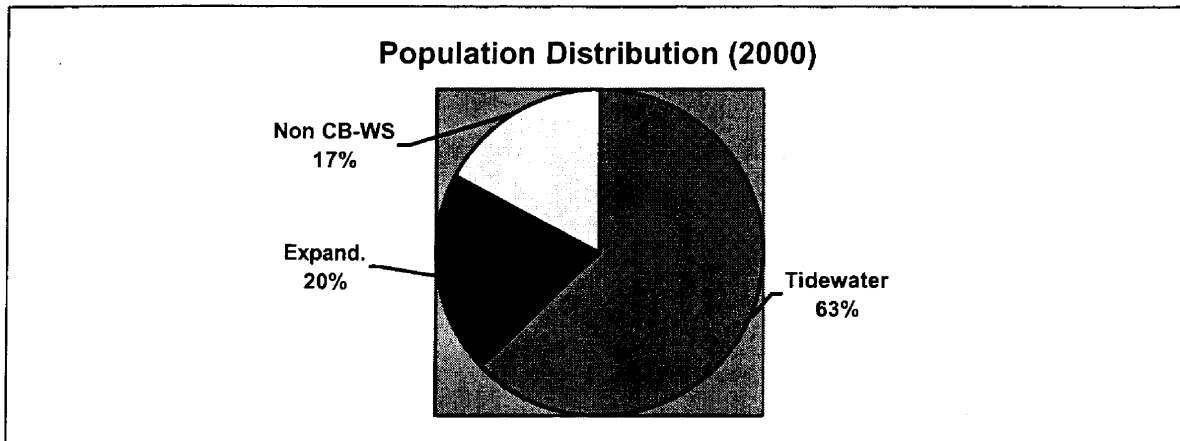
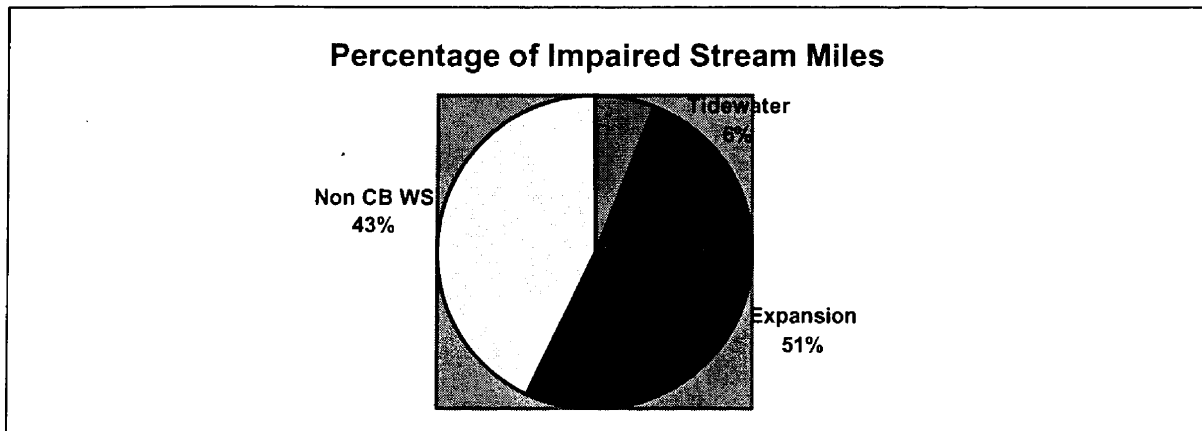


FIGURE I-4



Assessment of the benefits to the environment: The task presented by the directive to “assess the benefits to the environment” is daunting. After all, the Commonwealth has a very comprehensive set of environmental programs that were allocated over \$235,992,000 in funds for fiscal year 2001. Of that, more than \$35,000,000 is a conservative estimate of the amount directed toward non-point source pollution activities throughout the Commonwealth. Given the magnitude of this existing commitment, the question is not whether there is a benefit to the environment of expanding the current Bay Act program but whether doing so is an effective, efficient, and an appropriate way to protect and enhance the quality of state waters. A perspective on that proposal is graphically illustrated in Figure I-4 which shows that within the Tidewater Virginia area, the number of miles of impaired streams is dramatically less than in the balance of the watershed (the proposed expansion area) or outside the watershed. This fact is even more startling when viewed in concert with Figures I-2 and I-3 that show 2/3^{ds} of the population lives in Tidewater while it has only 1/4th of the land area.

Within Chapter IV, the environmental programs of the state are examined in light of the need to protect the quality of state waters. In conducting the study and reviewing the gathered information, it became apparent that the current Bay Act program presents a unique approach to controlling nonpoint source pollution through its focus upon the land use connection and in the long-term context of comprehensive and land use planning. The benefit of the Bay Act program approach - through which a locality’s approach is applied in an integrated and comprehensive framework as opposed to compliance with, or imposition of, a singular requirement - emerges as an underlying principle that needs to be applied in order to achieve desired water quality goals.

In order to focus upon the environmental benefits that might accrue specifically with an expansion of the Act, the analysis in Chapter IV addressed each of the performance criteria contained in the Act. It was noted that a cost/benefit analysis cannot be applied to the effects of the criteria due to the nature of the issues. Also, the need for developing an expansion program in concert with the activities and programs of other agencies (in order to avoid redundancy and inefficiencies) was evident.

Chapter IV also addresses the commitments that the Commonwealth has made through participation in the original Chesapeake Bay Agreement, and its subsequent updates, essentially mandate to the Commonwealth that the goals, purposes, and programs established for the Bay Act be expanded to the balance of the watershed. The original Bay Agreement called for a watershed wide program that focused upon the land use based approach as practiced through the Bay Act. In assessing the year 2000 Bay Agreement, there are commitments specific to concepts of sound land use that are only addressed, in Virginia, through the CBLAD program. Finally, the direction of the overall Bay Program has gone through a recent shift from measuring nutrient loads to the establishment of environmental end-points that support living resources. This concept shifts the need for water quality protection programs to not only deal with the mechanics of erosion and sediment controls, controlling septic discharge, and structural stormwater best management practices but also to include low impact development and better site

design practices. The current Bay Act program advocates for such practices and they are addressed through the program's local implementation review component.

Given that the myriad of state-based environmental programs are applied state-wide and the current Chesapeake Bay Act program applies exclusively to Tidewater Virginia it appears that during its twelve years of existence, it has had a disproportionate and positive effect upon protecting and enhancing the quality of state waters. This fact puts the focus upon the key aspect of the Act – that it is a mandatory as opposed to a voluntary program. Education and incentive based, voluntary programs may be a preferred way to approach many problems; however, in addressing the need to protect the quality of state waters the mandatory program, as implemented through CBLAD, appears to not only be effective in its results but it does so at a direct dollar expense to the Commonwealth that is significantly less than the wealth of voluntary, educational, and short-term programs that exist.

A significant perspective of the issue of expansion, that emerged both through research and testimony, is that of emphasizing the total integrated system of the bay, its tributaries, and the streams that feed the tributaries. This concept is reinforced by numerous articles and reference documents that framed the issue as “saving the Bay by saving watersheds.” From that concept, a suggestion was made that if a new program were created for the proposed Expansion Area it should be named in that manner, perhaps, along the lines of the Chesapeake Bay Rivers Act/Program. It was also noted that the language of the current Act addresses the protection of the quality of state waters and does not refer specifically to the Bay except in connection with the rivers that feed it.

Costs and effects to state and local government: Chapter V examines the effects to state and local governments in terms of program development and implementation. Issues pertaining to the costs to local government are addressed only in general terms since the Act carries with it an obligation to provide those resources necessary to carry out and enforce its provisions (§ 10.1-2100.B). The costs to the state are specifically addressed in Chapter VII.

To better understand the potential impacts to localities, a survey relating to the status of their plans and codes was undertaken. The survey instrument and responses are provided in the appendices. Table V-2 provides a summary of the results. In general, the localities in the proposed Expansion Area appear to have comprehensive plans and land development codes that are maintained on a regular basis. The survey also contained some specific questions directed toward innovative and state-of-the-art planning concepts and regulatory approaches. These items included watershed based planning, use of environmental overlays, and built-in code flexibility for designs that would accommodate sensitive environmental features. Localities that have such approaches range from 10%-25% of those who responded. Thus, while the general condition of plans and codes is viewed as being favorable, there appears to be significant work necessary to encourage and promote the type of planning and development practices, in the proposed Expansion Area, as is envisioned by the Commonwealth's commitments in the Chesapeake Bay 2000 Agreement and as is necessary to achieve the Commonwealth's water quality goals.

Thus, there will be additional staffing demands at the local level since a new area of expertise will be required. However, through the proven effectiveness of CBLAD's current local assistance grant and liaison program that work can be accomplished.

Additionally, to get a direct input on the potential effects to localities, seven outreach meetings involving over 90 individuals were held in the proposed Expansion Area. Input from those meetings including items of concern and suggestions for modifying the existing program and for taking different approaches altogether are contained in Chapter V. Chapter V also provides a specific analysis for each of the program components that are necessary to develop and implement a local program that is consistent with the Act and its Regulations. These included such items as identifying the environmentally sensitive areas to which the performance criteria would apply, changes to local codes, compliance with E&SC, stormwater, and agriculture criteria, updating comprehensive plans, and the like.

There is no definitive statement that can be made with respect to the effect upon local government if the Chesapeake Bay Preservation Act is extended to the balance of the Watershed. It is evident from this information in Chapter V, that the effect upon an individual locality is dependent upon its environmental situation; the amount, type and location of development that is occurring there; the status of its plans and codes; the expertise that the locality has on staff; and other factors. However, it can be definitively stated that through the current program applied in the Tidewater area, compliance with the Act has not created any adverse effect to local government that could not be accommodated or overcome. The key to having a successful overall program is adequate technical assistance, adequate funding, and operating within the comprehensive framework that is provided in the local governmental context of planning and regulations.

It can also be stated that the current program cannot simply be applied to the expansion area by inclusion of the western localities to the Act and have it work in an efficient and effective manner. Besides the environmental differences identified in Chapter IV, there are significant demographic differences between Tidewater and the proposed Expansion Area. The overall character of the areas is different, the development pressures are different, and the capacity to assimilate new programs varies widely between the areas and within the proposed Expansion Area itself.

While the cost to the state for implementation of an expansion is addressed separately, the work undertaken to assess the impact upon local units of government stresses the need to emphasize coordination and eliminate duplication of state programs and efforts. While there are concerns expressed by some in the Tidewater area over issues of duplication and coordination, they are mainly associated with reporting requirements. In the potential expansion area, there was strong sentiment that there are numerous new programs and activities that are overwhelming the localities. The framework created by the Act and its Regulations, including the CBLAD liaison program and network seems to have been quite effective in helping localities to put their water quality planning needs into a coordinated local perspective. Thus, it seems that an expansion of the Act and its

requirement for water quality planning at the local level with state assistance offers a proven way to make the overall state effort more efficient and effective.

Potential need for changes to existing regulations: As this study progressed, it soon became evident that not only would changes need to be made to the performance criteria, but that changes would be necessary to all aspects of the program including its organization. Besides this study, CBLAD was concurrently processing a substantial change to their existing Regulations. Hundreds of comments were received and are contained within a two-volume “response to public comment” document. CBLAD had the opportunity to consider those comments, in addition to the expansion specific testimony gained at the outreach meetings, in exploring the subject of potential changes.

The charge in HJ 622 was to identify the potential need for changes if an expansion were to occur. Tables I-4 through I-6 summarizes the contents of Chapter VI where the potential changes are addressed. Those items pertaining to the designation criteria and the performance standards would be established through the Administrative Procedures Act with a new set of regulations tailored to the proposed Expansion Area. A stakeholder process would be a part of this effort that would take between 18 and 24 months to complete.

Table I-4 Legislative Matters	
<i>Modification to the existing Chesapeake Bay Preservation Act</i>	<i>Creation of a new Chesapeake Bay Rivers Act</i>
<ul style="list-style-type: none"> • Add 13 localities to the current program 	<ul style="list-style-type: none"> • Modeled after the current Act • Replace the definition of “Tidewater Virginia” with the list of localities in the proposed Expansion Area • Incidental modifications for administrative and technical matters

Table I-5 New Regulations	
<i>Interim Regulations</i>	<i>Final Regulations</i>
<ul style="list-style-type: none"> • <i>to be adopted within six months of the effective date of the new Act</i> 	<ul style="list-style-type: none"> • <i>to be adopted within 24 months of the effective date of the new Act</i>
<ul style="list-style-type: none"> • Establishes the decision-making, administrative, and review processes • Modeled after the current Regulations • Maintain the Board at 9 members and accommodate two at-large members • Establishes the criteria for including the protection of the quality of state waters in local comprehensive plans • Establishes a schedule for local government compliance with bringing comprehensive plans into compliance 	<ul style="list-style-type: none"> • Establishes the criteria for the designation of the resource protection and resource management areas • Establishes the performance criteria • Establishes a schedule for local government compliance with these matters.

Table I-6 Designation and Performance Criteria			
<i>Resource Protection Area (RPA) considerations</i>	<i>Resource Management Area (RMA) considerations</i>	<i>Performance Criteria</i>	
Isolated wetlands Flood plains Farm ponds Steep slopes Buffer criteria	Character of karst topology Wellhead protection Sinkhole considerations	Three general criteria Stormwater criteria E&SC criteria Wastewater (septics) Agriculture Silviculture Wetland permitting	no significant change no significant change consider changes statewide defer to HJ 771 and DOH no significant change no significant change no significant change

As can be gleaned from the above Tables, the task of formally expanding the goals, purposes, and criteria from the current Act is not so much a scientific or technical challenge as it is going through the required processes and addressing issues of - to which land, or features, the resource protection and resource management designations should apply.

The other aspect of developing the overall program is to take into consideration the changes in environmental programs that have occurred since adoption of the original Bay Act and its Regulations. The Commonwealth has instituted several new programs since the late 1980's and early 1990's. It has new obligations with regard to the Bay Agreement and the commitments contained therein. Also, it must consider the impact upon local governments, not just in terms of technical and financial assistance (described in Chapters V and VII) but also in terms of actual, day-to-day, implementation of the program. As stated in § 10.1-2100.B, "local governments have the initiative for planning and implementing" the provisions of the Act. The Commonwealth has the obligation of acting in a supportive role by establishing the criteria and providing the resources necessary to carry out and enforce the Act. A part of this obligation is to ensure that State programs do not result in redundancy and that the requirements imposed by the multiple programs of the State do not burden the administrative capacity of local governments.

In developing the program for the proposed Expansion Area, its relationship to the tributary strategies, the TMDL program, the E&SC program, and VPDES programs along with other activities must be considered. As was suggested at one of the outreach meetings, "weave it, don't stack it".

Needed State financial resources for operations and in the form of local assistance grants:

The Department operates two grant programs that provide resources to carry out the program at the local level. These are the Agriculture Plan Assistance Program and the Local Assistance Grant Program. Chapter VII provides historic data on the operation of these two grant programs and projects future needs for an expansion of the Act.

For the purpose of projecting costs associated with the Agriculture Plan program there is no special formula. The demand greatly exceeds the financial resources available to meet

it other than over an extended time period. Thus, it simply comes down to priorities and the availability of resources. For the purpose of projecting implementation costs, the extrapolation method used for the fiscal impact of SB 821 considered a relationship between the number of units of government and the difference in total land area with a resulting annual allocation of \$750,000 for farm plan development. While other scenarios could be created, the annual allocation of \$750,000 is conservative but reasonable given the great demand that exists.

The local assistance grant program is the major vehicle for the actual development and implementation of the local programs. The amount of funding provided through this vehicle, classified by type of jurisdiction and use is shown in Table I-7.

<i>Jurisdictions</i>	<i>Number</i>	<i>Amount</i>	<i>I - Dev.</i>	<i>I - Imp.</i>	<i>II - Dev.</i>
Counties	245	4,762,922	890,095	3,383,512	489,315
Cities	87	1,782,609	380,370	1,071,034	331,925
Towns	34	470,179	173,314	217,465	79,400
PDCs	85	1,798,984	441,549	748,688	608,749
TOTALS	451	\$8,814,694	\$1,885,328	\$5,420,699	\$1,509,389

The historic allocation was analyzed by type of jurisdiction and use and then allocated by a factor relating to the change in the type of jurisdiction between the expansion localities and the Tidewater localities. The resulting long-term, annual allocation was \$797,454 which is substantially less than the annual amount of \$1,690,393 that was contained in the FIS that was prepared for SB 862.

In addition to the implementation grant programs, Chapter VII addressed the state program funding necessary to effectively and efficiently carryout an expansion. Two scenarios were developed. The additional annual costs for the operations scenario reflecting the program described in this Executive Summary along with the grant programs is shown in Table I-8 for the initial two-year start-up period and in Table I-9 for the sustained program.

<i>Purpose</i>	<i>Annual Costs</i>	<i>General Fund</i>	<i>Other Sources</i>
Operations	\$ 378,715	\$ 190,000 1 st half of Va Fiscal Year	Consideration of reprioritization of the Bay Program Implementation Grant (EPA)
Local Assistance Grants	\$ 150,000	\$150,000	Although other sources may be used on a case-by-case basis, planning should be through the general fund.
Agriculture Grants	\$ 50,000	\$ 0	Work in concert with existing programs for Applying Bay Act farm plan concepts in the proposed Expansion Area

<i>Purpose</i>	<i>Annual Costs</i>	<i>General Fund</i>	<i>Other Sources</i>
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Operations	\$ 894,251	\$ 447,125	50% match to the balance from the Bay Program Implementation Grant (revised priorities)
Local Assistance Grants	\$ 797,454	\$797,454	For planning purposes, the total anticipated should be considered as a general fund obligation although it may be supplemented by other sources.
Agriculture Grants	\$ 750,000	\$500,000	Work in concert with existing programs for Applying Bay Act farm plan concepts in the proposed Expansion Area

Within Chapter VII, the potential for offsetting some of the additional costs was examined. This analysis looked at the general fund, the WQIA Fund, the EPA's Bay Program Implementation Grant. The potential offsets that were identified are shown in the above tables.

Table I-10 shows the combination of all the analysis along with the current CBLAD budget, other needs addressed in the study, the one-time costs associated with outfitting new position and the personnel needs.

<i>CATEGORY</i>	<i>Current Budget & Supplemental Needs</i>	<i>Initial Estimate for SB 821 Sustained</i>	<i>Expansion Scenario Per the Study</i>	
			<i>First two years [Annual]</i>	<i>Sustained [Annual]</i>
Personnel & Operations	1,585,856	3,624,814	1,952,071	2,429,837
Operations Supplement	114,144	114,144	114,144	114,144
Remote Office Ops	0	50,000	12,500	50,000
Competitive Grants	571,962	2,262,355	721,962	1,369,416
Comp Grant Supplement	0	728,158	n/a	n/a
Agricultural Grants	468,500	1,218,500	518,500	1,215,800
Ag Grant Supplement	0	31,500	n/a	n/a
WQ Monitoring Suppl.	150,000	150,000	150,000	150,000
TOTALS	2,890,462	8,179,471	3,469,177	5,329,167
Space/Equip set up (1x)	0	490,000	62,500	232,500
AGENCY MEL				
Appointed	1	1	1	1
Classified	20	49	26	35
TOTALS	21	51	27	36

Conclusion: The recently issued 2001 State of the Bay Report prepared by the Chesapeake Bay Foundation finds that the ecological health of the Bay has declined over the past year for the first time in four years. The report stated that despite efforts to stem the loss of farmland and open space, growth in the watershed was undercutting restoration efforts. While there are individual efforts and programs, (such as the E&SC, Ag-Cost Share BMPs, and stormwater management) they are not all mandatory nor do they realize their maximum efficiency when applied in a piecemeal fashion. The issues of growth and its impact on the environment are complex and comprehensive in nature. A comprehensive program, such as the eleven point (performance criteria) and planning program, that is consistent with the mandatory provisions of the Chesapeake Bay

Preservation Act, and that is implemented by local government concurrent with the impacts of growth and development would be useful in order to adequately address the on-going nature of enhancing and maintaining the quality of the waters of the Commonwealth. Such a program could effectively be applied throughout the entirety of the Chesapeake Bay watershed in order for Virginia to protect water quality, meet federal requirements such as the Clean Water Act, and meet its obligations under the Chesapeake Bay Agreements. Indeed, expansion of the Act program is consistent with the obligations incurred in the 1987 Chesapeake Bay Agreement and with the scope and approach of the commitments in the revised 2000 Agreement.

The Chesapeake Bay Local Assistance Department is pleased to have been able to undertake this study and present its findings so as to further the protection and enhancement of the quality of the waters of the Commonwealth.

Appendix D

Agency Responses

As part of an extensive data validation process, the major entities involved in a JLARC assessment effort are given an opportunity to comment on a draft of the report. Appropriate technical corrections resulting from the written comments have been made in this version of the report. Page references in the agency's response relate to an earlier draft and may not correspond to page numbers in this version. This appendix contains responses from the acting director of the Chesapeake Bay Local Assistance Department and from the Hampton Roads Planning District Commission.



OCT 4 - 2002

COMMONWEALTH of VIRGINIA

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

C. Scott Crafton
Acting Executive Director

CHESAPEAKE BAY LOCAL ASSISTANCE DEPARTMENT

James Monroe Building
101 North 14th Street, 17th Floor
Richmond, Virginia 23219
FAX: (804) 225-3447

(804) 225-3440
1-800-243-7339 Voice/TDD

October 2, 2002

Mr. Philip A. Leone, Director
Joint Legislative Audit and Review Commission
Suite 1100, General Assembly Building
Capitol Square
Richmond, Virginia 23219

Re: JLARC Study of CBLAD Program

Dear Mr. Leone:

Thank you and your staff for the opportunity to review an exposure draft of the report entitled "Implementation of the Chesapeake Bay Preservation Act." My staff and I have reviewed the report and developed detailed comments that I will forward to Eric Messick, the study team leader. Chesapeake Bay Local Assistance Board (CBLAB) Chairman, Cliff Schroeder, has also come into the office to review the report and has provided me with comments, which will be included.

In general, we consider the report to be fair and objective and are in agreement with its conclusions. The report includes some valid criticisms, particularly regarding the limited level of enforcement of the program's regulations to date. However, your staff was careful to point out the important reasons for this – lack of adequate resources, which forced the Board and agency staff to have to make tough decisions about prioritizing activities, and the protracted process to amend the regulations. Your staff also grasped the complexity of this program and the lack of foundational local documents among many of the small towns, which has been a factor in the length of time it has taken to assure proper establishment of local ordinances and comprehensive plans that are fully consistent with the regulations.

Characterization of Local Bay Act Program Establishment Process – Phases I, II and III

In that regard, the main concern we have with the report is the characterization of the local Bay Act program establishment process. For example, on page 21 the following statement occurs in the third paragraph:

“Originally, local governments were required to initially complete the first implementation phase in 1990. However, it was not until 2002 that all localities completed this phase. . . .”

This statement, or some version of it, shows up in a number of places in the report. It is technically true that some localities adopted ordinances to implement the program that were not completely consistent with the regulations initially, and agency staff worked with them over time to meet conditions set by the Board for establishing full consistency. However, by 1997 all Tidewater localities did have local programs and ordinances in place and were implementing these programs while working to satisfy the Board’s conditions. These conditions usually referred to minor elements of these local programs and did not typically inhibit full program implementation. However, I am concerned that the manner in which your staff has chosen to characterize this may lead some readers to conclude that some localities have not actually implemented the program at all until this year. In my detailed comments to Eric, I will provide some suggestions for other ways to characterize this.

We would also like to correct the impression given in the report to “Phase III” of the program, which is referred to in several places as having been “postponed.” Perhaps we have added to some of the confusion about the Bay Act program by coining the terms Phase I, Phase II and Phase III, although the first two phases had fairly clear beginnings and endings. However, Phase III will be an on-going iterative process. The idea behind Phase III was that, once localities had adopted ordinances, amended comprehensive plans to include water quality protection elements, and begun to implement their programs, they should then reconcile their land use codes to eliminate any internal conflicts or other inconsistencies. In reality, that kind of process is to some degree perpetual. Local comprehensive plans are required by State Law to be updated every five years. Localities regularly change land use ordinances for one reason or other, even apart from the Bay Act. Each of these changes might necessitate a review by the CBLAB to assure consistency with the Bay Act regulations. This iterative, unending process is what we have called “Phase III.” In many other state regulatory programs, this would be considered merely routine program implementation activities.

Recognition of Limited Resources

We agree with your staff’s recognition of the Department’s (CBLAD’s) limited resources over the years. In fact, I believe it is fair to say that the agency has never had the opportunity to reach its optimum resource level due to a number of factors. The agency was created in mid-1988 and spent the first 15 months with minimal staff completing the development of final regulations required by the Bay Act. We got some help through the 1990 budget, but then the Wilder Administration was immediately confronted with revenue shortfalls and all state agencies had to deal with those. Though CBLAD, as a new agency, was spared large budget reductions, we also could not add needed staff. The Allen Administration focused on down-sizing State Government, including CBLAD, before the agency had a chance to be “right-sized!” CBLAD had difficulty holding on to existing positions during that time, much less adding additional staff. With minor exceptions, the agency’s difficulty with obtaining needed staff and funding have continued to the present, capped off this year by the elimination of the local financial assistance funding from our budget.

We believe the elimination of these funds was due partly to a misunderstanding of the original legislative intent regarding funding assistance. There seems to have been one view that the financial grants program was only intended as a way to help localities establish their local programs and then, after a while, the grants would cease altogether. We disagree with this view

and suspect Tidewater localities also disagree. On the contrary, CBLAD understood that there would be more grant funding available in the early years, but that later – after the localities had established their programs – less financial assistance would be needed. This has indeed happened. However, there are many small towns and rural localities that do not have sufficient resources to adequately implement the Bay Act program without some financial assistance from the Commonwealth. Therefore, some funding assistance would need to continue. The Act states that, among its responsibilities, the Board shall provide both technical and financial assistance. Local governments consider this an important basis for their originally buying into this program – that the Commonwealth would help pay the cost of this mandate. In the absence of this funding assistance, they can only turn to CBLAD staff for greater technical assistance. But the agency has limited staff as well. We are gratified that the JLARC staff recognize this dilemma and appear to agree that continued State funding assistance for localities is needed.

We also agree with JLARC staff's conclusion that "*[t]he future viability of certain agency functions may be greatly impacted by . . . identified funding issues . . .*" and the statements in the findings that "*CBLAD staff may not be able to continue providing this level of assistance as a result of current and potential budget constraints . . .*" and "*. . . recent efforts by CBLAB and CBLAD to focus more on these [oversight and enforcement] issues could be jeopardized by budget cutbacks.*" Although CBLAD is a small agency, we believe that we have learned – because we have had to – how to deliver the Bay Act program very efficiently, with minimal overhead costs. Several previous evaluations of the agency, including Governor Allen's Blue Ribbon Strike Force, have found this to be true. There is no fat to cut. We are now cutting off arms and legs. An important extension of this reality is that merging the agency with the Department of Conservation and Recreation will not result in any significant cost savings but may further inhibit the efficient and effective delivery of the program, as your staff points out.

Clarification of Potential Agency Program Overlaps and Duplication

Going back to the 1997 JLARC study of the Natural Resources Secretariat, there have been allegations of certain overlapping or redundant programs and duplication of effort of certain CBLAD programs with similar programs in other agencies. More specifically, stormwater management (DCR and DEQ), erosion and sediment control (DCR), agricultural nutrient management (DCR), and septic system regulation (VDH) have been mentioned as overlapping or duplicative. Some of these are also mentioned in this report. However, there is really not as much duplication or confusion as some perceive.

CBLAD included water quality requirements for nonpoint stormwater runoff in the Bay Act regulations because, at the time they were originally adopted, there were no such requirements in State Law or regulations. Later, the Stormwater Management Act was adopted, giving localities the option of adopting programs to accomplish this objective, among others. However, outside of Tidewater, where this was already required by the Bay Act regulations, few localities have adopted local stormwater ordinances. Furthermore, regulating nonpoint stormwater runoff is different than the permitting program operated by DEQ. With the recent amendment of both DCR's State Stormwater Management Regulations and the Bay Act regulations, CBLAD and DCR now use the same standards and criteria for local government stormwater programs. Furthermore, we have been working with DEQ to arrange for new stormwater permits to refer to effective implementation of the new State stormwater management standards by localities through either DCR or CBLAD programs as meeting the DEQ permit requirements. There is a strong possibility that further reconciliation of the three agency stormwater programs may be accomplished by the next General Assembly, with the possibility that CBLAD may no longer

need to separately require stormwater management (it may become mandated through the DCR law and regulations).

CBLAD actually doesn't duplicate effort of DCR regarding Erosion and Sediment (E&S) Control. The CBLAD regulations merely require that the DCR E&S requirements be applied within Chesapeake Bay Preservation Areas at a lower threshold of land disturbance area than otherwise required by the State E&S Control Law. DCR and CBLAD have a Memorandum of Understanding regarding E&S so that CBLAD defers to DCR in the review of state agency E&S plans. DCR typically doesn't review private development plans, but localities often submit these to CBLAD for comment, so our comments do address E&S by referring to the applicable DCR standards and criteria. Of course, CBLAD reviews those plans for many other program requirements as well. So we would submit that there is an appropriate division of labor regarding E&S Control, rather than duplication and redundancy.

For many years CBLAD has provided grant funds to local Soil and Water Conservation Districts (SWCDs) to fund the development of agricultural water quality plans for farmland within Chesapeake Bay Preservation Areas. These plans require three elements potentially: an erosion prevention element, a nutrient management element, and a pest chemical control element. DCR's eight Nutrient Management Specialists in Tidewater help provide Nutrient Management training to the SWCD conservation planners, review the Nutrient Management components of Bay Act water quality plans, and develop some of the Nutrient Management elements of these plans. However, during the past several years, most of the DCR staff were devoted to the development and review of Nutrient Management plans required by DEQ's Poultry Waste Management Law. Additionally, the DCR staff are not trained to develop the other two components of the Bay Act farm plans. More important, even if the DCR Nutrient Management staff had the ability to develop complete Bay Act farm plans and were tasked to supplement the efforts of the SWCDs (or make up for the loss of the Bay Act grant funds by developing these plans), it would still take many years for all of the farm tracts that require plans to have plans developed for them. Therefore, any expectation that DCR staff would be able to meet the demand for Nutrient Management plans required by the Bay Act regulations is not realistic.

Finally, the Bay Act regulations include septic system maintenance criteria because (1) failing septic systems are widely recognized as a significant contributor of both nutrient and fecal coliform pollution, and (2) the VDH septic system regulations do not include any requirements for system maintenance. The Bay Act is considered supplemental to other authorities, and the Board determined this was an issue that needed to be addressed. However, the VDH is currently considering adding system maintenance requirements to its septic system regulations. If and when that happens, the CBLAB has stated that they will rescind the septic system requirements in the Bay Act regulations, leaving VDH with sole oversight of septic systems.

In view of the above, circumstances are already developing towards CBLAD being able to focus on **the one activity that really distinguishes it from all other agencies: CBLAD is the only agency mandated by law to provide local governments with land use planning assistance to protect water quality.** The JLARC survey of localities indicates that we do that well although, with adequate resources, we could do it much better. Given the projections for population growth in Virginia over the next 20-25 years, this kind of assistance will continue to be important if the Commonwealth expects to prevent further increases of pollution to the Chesapeake Bay and other State waters, much less meet the pollution reduction goals we have already set.

Finally, I would like to address each of the six Findings and eleven Recommendations in the report.

Response to JLARC Findings

1. *The process by which localities have achieved consistency with Bay Act requirements has been slow, but gradual progress was made. In part, slow progress was due to the complexity of achieving the required tasks, which included mapping environmentally sensitive areas, adopting the performance criteria required by the Bay Act into local ordinances, and adopting water quality protections into local comprehensive plans as required by the Code of Virginia.*

Agency Response: This is a fair assessment of the facts.

2. *The enforcement record of localities under the Act is mixed. Key problem areas identified in this review included localities permitting development in environmentally sensitive areas, and not adhering to the regulations concerning septic tank pump-outs and the use of Best Management Practices (BMP) agreements in conjunction with permitted encroachments into the sensitive lands.*

Agency Response: While this is generally correct, there are reasons, as pointed out in the report. The agency's staff and funding resources have been too limited to be able to both assure consistency of all the initial ordinances and comprehensive plan amendments and also aggressively oversee local implementation and enforce the program's requirements. It is also important to remember that the Bay Act program was created to be a State-local *partnership*. Given the limited resources, the agency and Board have consciously chosen to partner with each locality to methodically work towards correcting observed problems, rather than quickly and arbitrarily proceed to engage in enforcement actions. However, the localities know there is a line that cannot be crossed. On the two occasions where the Board partnered with localities to unsuccessful conclusions, the Board began official enforcement proceedings and both localities backed down and made the needed program corrections.

3. *The majority of local governments responding to a JLARC staff survey indicate that CBLAD provides appropriate technical assistance concerning their programs. However, CBLAD staff may not be able to continue providing this level of assistance as a result of current and potential budget constraints.*

Agency Response: We are pleased to receive such a favorable response to an independent survey of our assistance efforts. We agree that further funding cuts will jeopardize our ability to provide quick, quality assistance.

4. *State oversight and enforcement of the provisions of the Bay Act and the regulations has been weak, and recent efforts by CBLAB and CBLAD to focus more on these issues could be jeopardized by budget cutbacks.*

Agency Response: The CBLAB approved policies and procedures for Bay Act local program implementation reviews at their September Board meeting. The Department plans to begin conducting reviews in the next few months, as pointed out in the report. We have requested additional funding and personnel during the last few budget cycles in order to begin this work

sooner, but the previous administrations did not support our requests. We are poised to begin the important work of assessing how effectively each local program is being implemented and, by extension, how well water quality is being protected via the Bay Act. Further funding reductions will, indeed, slow down this effort.

5. *Four options regarding CBLAD's placement and responsibilities are shown in the report for consideration regarding CBLAD's future status as an agency and a potential merger with DCR. It appears that some small cost economies and increased levels of coordination on some technical issues may occur as a result of such a consolidation. However, there also are concerns about the impact of such a change on the short-term performance of, and long-term priority given to, the board and agency. In view of these concerns and the commitments the State has made to protect the water quality of the Chesapeake Bay, it may be more appropriate to allow CBLAD to continue performing its core functions as a separate entity.*

Agency Response: We consider this an astute observation and couldn't agree more. We believe that there will be no significant cost savings from a merger without further diminishing the effectiveness of the program.

6. *State and local policy-makers will likely need to decide whether to expand the geographic coverage of the Bay Act in the absence of fully conclusive benefit and cost data. In light of the State's budget difficulties, a prudent course may be to pursue limited expansion activity, by achieving consistency in participation among planning districts with localities already under the Act, or by working with localities interested in pursuing land use planning without the compulsion of a State mandate.*

Agency Response: We agree with this point, especially in view of the current State revenue situation. In reality, even including the three counties, two cities and several towns not currently subject to the Act but within Planning Districts in Tidewater would stretch the Department's limited staff resources and distract from the local program implementation review process. Furthermore, assistance to interested localities outside Tidewater would also stretch currently limited resources.

Response to JLARC Recommendations

1. *The Chesapeake Bay Local Assistance Department and the Tidewater Planning District Commissions should explore the feasibility of creating Bay Act program staff positions at the PDCs. The regional Bay Act program staff would provide administrative and enforcement services to localities that are members of their respective PDCs.*

Agency Response: The Department will engage in discussions with PDCs and localities to determine if this is an acceptable solution to some of the local staffing problems. In fact, CBLAD has accomplished this in a few PDCs by funding a single position that provided certain plan review and/or inspection/oversight services for multiple localities. However, the agency's ability to do this will depend on the availability of more funding for this purpose. Another consideration is that some local governments are not members of their regional planning commission and are resistant to allowing the PDC to exert any authority over their local activities. In view of that, this solution may not be universally applicable.

2. *The Chesapeake Bay Local Assistance Board and Department should ensure through the compliance review process that the Tidewater localities enforce the 100-foot Resource*

Protection Area buffer requirement as established in the Chesapeake Bay Preservation Area Designation and Management Regulations.

Agency Response: We intend to do this, building on the current complaint-driven enforcement process with the addition of upcoming local program implementation reviews.

- 3. Through the compliance review process, the Chesapeake Bay Local Assistance Department should ensure that the Tidewater localities are enforcing BMPs to mitigate for RPA encroachments that are based on signed maintenance agreements. CBLAD should also require localities to periodically inspect BMPs to ensure property owners maintain them. In addition, Tidewater localities, CBLAD, and the Virginia Department of Health should jointly develop a process to ensure that residential septic systems are identified and periodically maintained in accordance with board regulations.*

Agency Response: We intend to do this through the upcoming local program implementation review process.

- 4. The Chesapeake Bay Local Assistance Department should continue to hold Tidewater-wide workshops as a mechanism for creating consistency across the Tidewater localities and providing an opportunity for local governments to share techniques with one another.*

Agency Response: We fully intend to continue this service, and there are currently funds in the agency budget to conduct the next annual workshop in May of 2003.

- 5. The Chesapeake Bay Local Assistance Department should provide training to the members of the Board and the local governments on the potential administrative and legal options available to the Board for ensuring compliance with the provisions of the Bay Act and regulations.*

Agency Response: We intend to provide the Board with this training at their next meeting (December 2002), when the two new Board members should be present. Following that, we will develop a letter or other written guidance to the local governments describing the additional enforcement options articulated by the Attorney General's opinion.

- 6. The Chesapeake Bay Local Assistance Department should begin training local program staff on the requirements and activities associated with the Local Program Compliance Review as soon as possible after adoption by the Board. The training should include, but not be limited to: the types of information needed to be tracked, how it should be reported, and how it should be recorded when it is first received.*

CBLAD staff has already begun developing both the in-house and local government personnel training modules needed to undertake the compliance evaluation process. The staff believes it is important to complete the in-house training by the end of November, 2002, while the concepts are still fresh. Beginning immediately, staff will notify local program administrators of the information needed for the compliance evaluation process, and will make themselves available for presentations to local staff meetings, Planning Commission meetings, or meetings of local legislative bodies. Additionally, staff has already begun the process of prioritizing the localities for compliance evaluation purposes and intends to begin conducting site investigations in January 2003.

7. *The Chesapeake Bay Local Assistance Department should develop and submit a new performance measure to the Department of Planning and Budget that will address the outcomes or impacts of its compliance review process.*

Agency Response: The Department has already begun working on language for such a performance measure. We are finalizing the language at this time and intend to submit this to DPB in the near future. There is also already a commitment in the agency Executive Agreement with the Governor pertaining to a target number of these implementation reviews being conducted.

8. *The Chesapeake Bay Local Assistance Department should seek to fill its vacant local liaison position, when State hiring and budget policies provide this opportunity.*

Agency Response: Actually, this position should not be affected by budget reductions. The Department has already sought and received approval from Secretary Murphy to fill this position. The position has been advertised and applications are currently being screened for potential interviews. We intend to fill this position as soon as we find the right person for the job.

9. *The Secretary of Natural Resources should request that the Chesapeake Bay Local Assistance Department prepare a document prior to the 2003 General Assembly Session that will assist policy-makers in deciding whether the Polecat Creek Monitoring project can and should be continued in spite of current State budget difficulties. The document should overview the approach that the Polecat Creek project has taken for assessing the impact of land use policies under the Bay Act, and outline the probable time frame and costs that are necessary.*

Agency Response: I have already directed the Department's Polecat Creek project manager, Dr. Ram Gupta, to prepare such an assessment, which we intend to have complete prior to the beginning of the 2003 General Assembly session.

10. *The Chesapeake Bay Local Assistance Department should include a request for funding for a local competitive grants program to achieve Bay Act purposes as part of its budget request, at a time when State revenue availability appears to provide this opportunity.*

Agency Response: We will certainly do this. We would be interested in finding a way to restore at least some of this funding sooner rather than later, given the need for funding assistance that exists among a number of the Tidewater localities. We have been able to maintain some continuity in the grants program through the agreement by DEQ, DCR and NOAA to reprogram some Coastal Zone grant funds this fiscal year to Tidewater localities for Bay Act purposes. However, that is a one-time opportunity. Currently there are no funds in the Department's budget for grants in FY2004.

11. *The General Assembly may wish to consider clarifying the Bay Act regarding the nature of the cooperative State and local role in providing the resources needed for the Bay Act program under §10.1-2100 of the Code of Virginia.*

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Mr. Philip A. Leone
October 2, 2002
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Agency Response: The Department and Board would be happy to work with the JLARC or appropriate committees of oversight pertaining to such a clarification.

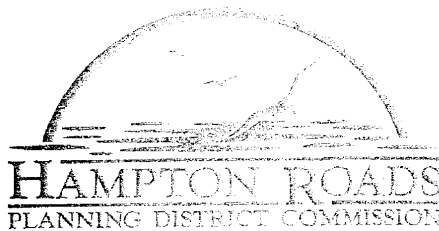
Thank you again for the opportunity to review the exposure draft of this report and provide comments. If you or members of the Commission have any further questions or desire additional information, please don't hesitate to contact me.

Sincerely,


Scott Crafton

CSC/ce

c: The Honorable L. Clifford Schroeder, Chairman, CBLAB
The Honorable Members of the Board (CBLAB)
The Honorable Tayloe Murphy, Secretary of Natural Resources
Eric Messick – JLARC
Martha Little – CBLAD



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Joseph D. Hester, *Mayor*

YORK COUNTY

James C. McReynolds, *County Administrator*
Shane B. Smith, *County Council*

December 18, 2002

Mr. Philip A. Leone, Director
Joint Legislative Audit and Review Commission
General Assembly Building, Suite 1100
Capitol Square
Richmond, Virginia 23219

Re: Report on Implementation of
the Chesapeake Bay
Preservation Act (LUG:82)

Dear Mr. Leone:

The Hampton Roads Planning District Commission is in receipt of the Joint Legislative Audit and Review Commission's Report on Implementation of the Chesapeake Bay Preservation Act. (Commission Draft, October 15, 2002.)

At its Executive Committee Meeting of December 18, 2002, the Hampton Roads Planning District Commission approved this letter and attached comments, expressing its concerns with some aspects of the JLARC Report on Implementation of the Chesapeake Bay Preservation Act.

The HRPDC is concerned that local governments, which are the key to successful implementation of the Bay Act, were not given an opportunity to review the report, prior to its publication and presentation by the JLARC staff. We understand the difficulty in coordinating such a potentially massive review in a fairly short time period. For reports of this nature, we recommend that in the future those local governments that are specifically addressed in the report be given a review opportunity. Alternatively, review copies could be provided to the Planning District Commissions covering the affected area with a request that they coordinate local review and input on the report.

The HRPDC is concerned about the report's presentation of information about local government consideration of buffer encroachment requests. As you and your staff are aware, the Bay Act and implementing regulations provide these mechanisms for use by local governments in accommodating the development expectations of owners of property that was subdivided prior to the passage of the Bay Act and in accommodating

Mr. Philip A. Leone, Director
December 18, 2002
Page 2

reasonable uses of all properties in Chesapeake Bay Preservation Areas. In discussing these issues, the report does not provide adequate explanatory text discussing the different landscape conditions and development character that must be considered in local decisions. It does not distinguish between encroachments allowed on pre-1989 and post-1989 lots; nor does it address the mitigation requirements imposed by local governments in approving encroachments.

Detailed comments, developed by the Hampton Roads Chesapeake Bay Committee, are attached. The Hampton Roads Chesapeake Bay Committee consists of representatives of the fourteen (14) cities and counties and one (1) town of Hampton Roads that are responsible for administering local Bay Act Programs in the region, and representatives of the region's two (2) non-Bay localities. The JLARC Report on Implementation of the Chesapeake Bay Preservation Act was reviewed by the Committee at its meeting on December 5, 2002.

The Hampton Roads Planning District Commission appreciates the opportunity to review and comment on this important report. We request that our comments be conveyed to recipients of the report to clarify the approach and experience of Hampton Roads local governments in implementing the Chesapeake Bay Preservation Act. We would be happy to meet with you and your staff to discuss these issues in further detail if you feel that would be appropriate. If you have any questions, please do not hesitate to call.

Sincerely,



Louis R. Jones
Chairman

LRJ/lw

Attachment

Copy: Hampton Roads General Assembly Delegation
Members, Chesapeake Bay Local Assistance Board
Mr. Scott Crafton, Acting Director, CBLAD

**COMMENTS OF THE HAMPTON ROADS PLANNING DISTRICT COMMISSION ON
THE REPORT OF THE JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION
ON IMPLEMENTATION OF THE CHESAPEAKE BAY PRESERVATION ACT**

The Report Summary indicates that localities approved a substantial amount of encroachments into the RPA. The accompanying table indicates that ninety-seven percent of applications reviewed were approved and that thirty percent of the approved encroachments were into the seaward fifty feet of the buffer. While the full report provides more explanatory detail on the two categories of approvals – waivers and exceptions, the lack of detail in the summary creates a misleading impression. Typically, the summary is the part of a report that most people read and remember.

The Report Summary does not explain the relatively high number of approvals versus denials. There is no requirement that records be kept on potential encroachments that do not result in formal consideration by the locality. Typically, applicants meet with local government staff prior to submitting a formal application for a waiver or exception. If the local staff believes that the application would not be approved, they advise the applicant and frequently the applicant will not proceed with the project or will modify the project to avoid the need for the waiver or exception. No record of this “denial” is maintained. If the applicant decides to proceed with the project, a formal application is filed and considered through the local government’s appeals process. If the applicant is denied, a record is maintained. In most localities, these formal applications and denials constitute the smallest portion of denied requests.

The report does not distinguish between encroachments on pre-1989 and post-1989 lots. Encroachments on pre-1989 lots are provided for specifically in the regulations. Generally, approval of an encroachment into the buffer is required for pre-1989 lots to avoid a potential taking and the associated compensation. In James City County, for example, of the forty-five (45) encroachments cited in the Report during FY 2000 and FY 2001, thirty-nine (39) waivers were approved for pre-1989 lots. The remaining six (6) projects were all post-1989 lots and entailed five (5) exceptions and one (1) denial. Experience in Virginia Beach was similar – of fifty (50) projects, forty-three (43) were for pre-1989 lots.

Most localities in the Hampton Roads region require some form of mitigation in exchange for the buffer encroachment. As a condition of encroachment approval, the localities require applicants to restore or enhance the remaining buffer, to restore or create new tidal or nontidal wetlands areas, or to establish some form of vegetative best management practice elsewhere on the property to assist in managing stormwater runoff from the impervious areas of the site. For example, Gloucester County requires that a mitigation plan be submitted and approved as part of the approval process for any encroachment. Pending approval of the mitigation plan or appropriate surety, no land disturbing permits or building permits are issued. Prior to issuing a certificate of occupancy and closing the file on a project, Gloucester County staff inspects the site to determine that all mitigation has been successfully accomplished. In all localities, local

government staff assist the applicant in developing appropriate mitigation plans. The Report does not address this and should be modified to reflect local government practice and experience.

Hampton Roads localities routinely encourage the use of vegetative BMPs as a condition of encroachment approval. During development of a Regional Best Management Practices Manual in 1991, the HRPDC and the region's localities realized that structural BMPs may not be the best approach to stormwater management on small sites, especially small residential sites or single family lots. As a result, they pursued through the HRPDC, development of a Vegetative Practices Design Guidance Manual to assist in addressing small sites and the stormwater management associated with encroachments. They have continued working through the HRPDC to collect and exchange the latest research on the effectiveness of such practices and to use them where appropriate to site-specific conditions. For example, the City of Hampton routinely approves the use of vegetative BMPs in cases where the required pollutant reduction is 10% or less. They require one-to-one replacement of the buffer area affected by encroachments with other mulched and landscaped beds on the property and require specific tree and shrub replacement depending on the nature and area affected by the encroachment. In the City's experience, most buffer encroachments impact only marginal lawns or sparsely treed areas and not functioning riparian buffers. A functioning buffer is one consisting of a multi-layer vegetative cover (trees, understory vegetation, ground cover and/or mulch layer) and fulfills the pollutant reduction and other functions assumed in the Bay Act Regulations.

The report also needs to address the difference between buffer reductions and buffer encroachments. The Bay Act Regulations allow, through the waiver and exceptions process, for encroachments into the buffer. The revised Bay Act Regulations, while continuing to allow for this flexibility to accommodate specific site conditions, indicate that, while encroachments may be allowed, reductions to the width of the buffer are not allowed. An encroachment into the buffer may be allowed in certain circumstances, but the buffer is never reduced below one hundred (100) feet.

JLARC Staff

DIRECTOR: PHILIP A. LEONE
DEPUTY DIRECTOR: R. KIRK JONAS

DIVISION I CHIEF: GLEN S. TITTERMARY
● *DIVISION II CHIEF:* ROBERT B. ROTZ

SECTION MANAGERS:

PATRICIA S. BISHOP, FISCAL AND ADMINISTRATIVE SERVICES
JOHN W. LONG, PUBLICATIONS AND GRAPHICS GREGORY J. REST, RESEARCH METHODS

PROJECT TEAM LEADERS:

LINDA B. FORD
KELLY B. GENT
HAROLD E. GREER, III

● ERIC H. MESSICK
KIMBERLY A. SARTE

PROJECT TEAM STAFF:

ARIS W. BEARSE
WENDY N. BROWN
ASHLEY S. COLVIN
● GERALD A. CRAVER
JASON W. POWELL

TRACEY R. SMITH
● LAURA C. WHITELEY
CHRISTINE D. WOLFE
SANDRA S. WRIGHT

FISCAL ANALYSIS SECTION:

WALTER L. SMILEY, SECTION MANAGER
KIMBERLY A. SARTE

ADMINISTRATIVE AND RESEARCH SUPPORT STAFF:

JOAN M. IRBY
BETSY M. JACKSON
PAULA C. LAMBERT
BECKY C. TORRENCE

● ELLEN JACKSON, *INTERN*
WENDY THOMAS, *INTERN*

● Indicates JLARC staff with primary assignment to this project

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