REPORT OF THE COMMISSION STUDYING

The Future of Virginia's Environment

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

SENATE DOCUMENT NO. 4

COMMONWEALTH OF VIRGINIA
RICHMOND
2002

Members

Senator William T. Bolling
Senator Emmett W. Hanger, Jr.
Senator W. Henry Maxwell
Delegate David B. Albo
Delegate M. Kirkland Cox
Delegate R. Creigh Deeds
Delegate Thomas W. Moss, Jr.
Delegate Robert Lee Ware
Mr. David E. Anderson
Mr. John W. Daniel, II
Mr. Mary Bruce Glaize
Mr. Michael Lipford
Mr. Timothy Wade Maupin
Mr. Peter W. Schmidt
Mr. L. Clifford Schroeder, Sr.
Honorable John Paul Woodley, (Ex officio)

Division of Legislative Services
Staff

Susan L. Fry, ***Staff Attorney***
Dennis A. Walter, ***Staff Attorney***
Martin G. Farber, ***Senior Research Associate***
Iris A. Kincaid, ***Operations Staff Assistant***

TABLE OF CONTENTS

I. AUTHORIZATION AND OVERVIEW

The Commission on the Future of Virginia's Environment was originally created by the 1996 Session of the General Assembly as a two-year joint legislative subcommittee to study "the future of Virginia's environment." The General Assembly requested that the joint subcommittee examine the history of environmental and natural resources programs and budgetary trends for natural resource management in Virginia and to develop a long-term vision and plan for the future management of Virginia's natural resources. The joint subcommittee was continued by the 1998 and 1999 Sessions of the General Assembly and directed to examine a variety of issues, including the establishment of stable funding sources for the state park and open space systems.

From its inception, the joint subcommittee has been actively involved with a majority of the environmental and natural resources issues coming before the General Assembly. The joint subcommittee developed and supported the concepts that became the Virginia Water Quality Improvement Act, assisted in the development of the Virginia Land Conservation Act, recommended numerous improvements to Virginia's state park system, and played a role in debates on solid waste management and recycling, the importation of solid waste into Virginia, and the establishment of a program to regulate activities occurring in wetlands.

In recognition of the number of environmental and natural resources issues requiring examination and debate, as well as the expanding role of the joint subcommittee as a body of experts on such issues, the 2000 Session of the General Assembly passed Senate Joint Resolution 76 (Appendix A), formally reauthorizing the joint study committee as "The Commission on the Future of Virginia's Environment." The Commission was directed to continue oversight of its past recommendations and to create opportunities for its members to become educated on environmental issues that might require legislative action. The General Assembly also passed Senate Joint Resolution 133 (Appendix B), directing the Commission to examine strategies to reduce the amount of solid waste being deposited into Virginia landfills, and Senate Joint Resolution 217 (Appendix C), requesting that the Commission study the need to expand best management practices for the nonpoint source pollution program to include urban land uses.

II. FULL COMMISSION ACTIVITIES

During 2000, the full Commission held two meetings, on September 29 and December 19. At its initial meeting in September, the Commission included in its work plan the studies requested by 2000 Session of the General Assembly and reviews of:

- The Department of Environmental Quality's (DEQ) development of an accelerated closure schedule for older, out-of-compliance solid waste landfills;

- The status of regulations being promulgated by DEQ governing the disposal of medical waste and the transportation of solid waste by barge;

- The efforts of DEQ to implement the non-tidal wetlands legislation enacted by the General Assembly during the 2000 Session;

- The financial needs of the Virginia State Park System and land conservation programs; and

- The provisions of the renewed Chesapeake Bay agreement, *Chesapeake 2000.*

The Commission continued its subcommittees on Solid Waste, and Parks and Land Use, and established a Chesapeake 2000 Subcommittee. These subcommittees met seven times prior to the 2001 Session of the General Assembly.

Also at the Commission's initial meeting, DEQ Director Dennis Treacy provided members with a brief update on the progress of DEQ's efforts to develop a closure schedule for older, out-of-compliance landfills, revise regulations governing the disposal of medical waste, and promulgate regulations implementing the wetlands legislation. Anne P. Swanson, Executive Director of the Chesapeake Bay Commission, then presented a brief overview of the 1983 and 1987 Chesapeake Bay agreements and discussed the development of *Chesapeake 2000.*

A preliminary list of older, out-of-compliance solid waste landfill sites was prepared by DEQ, with each site assigned a date for closure according to an assessment of the risk it poses to the environment. When asked by members of the Commission about the anticipated costs of the early closures and the ability of affected localities to provide the funds necessary to properly close the sites, Mr. Treacy agreed to provide the Solid Waste Subcommittee with additional information on the schedule and anticipated costs.

The process to revise regulations governing the disposal of medical waste is progressing. Following an initial comment period, a technical advisory committee was formed to review possible changes and hold public hearings. Most outstanding issues have been resolved. The main issue remaining is the question of what constitutes "regulated medical waste." Discussions continue and DEQ expects to submit its proposed revisions to the Virginia Waste Management Board in December 2000.

The development of regulations implementing the wetlands permit program is on schedule to meet the October 1, 2001, effective date. A 30-member technical advisory committee was formed to discuss the issues involved in a series of public meetings held across the state. DEQ reviewed input obtained at those meetings and anticipates presenting draft regulations to the State Water Control Board at its December 13, 2000, meeting. The agency plans to take the steps necessary to obtain State Programmatic General Permit (SPGP) authority from the U.S. Army Corps of Engineers by the July 2, 2002, deadline contained in the legislation.

The original 1983 Chesapeake Bay agreement created a voluntary, regional partnership between the U. S. Environmental Protection Agency (EPA), Virginia, Maryland, Pennsylvania, the District of Columbia, and the Chesapeake Bay Commission and committed the partners to the development and implementation of coordinated plans aimed at improving the environmental health of the Chesapeake Bay. The 1987 agreement expanded the scope of that agreement with 29 commitments that outlined steps to be taken in six areas. Subsequent to the 1987 agreement, a number of additional goals were adopted, including goals placing a cap on nutrient loadings and

goals outlining acres of submerged aquatic vegetation to be restored, stream miles to be opened to fish passage, and miles of forest buffers to be reclaimed.

Because many of the goals and commitments of the previous Chesapeake Bay agreements were to be met in 2000, the partners in 1999 began the process of assessing the progress made toward restoring the health of the Chesapeake Bay and determining the actions necessary to build upon that progress to continue to restore and protect the Chesapeake Bay into the next century. After numerous meetings, draft proposals, and opportunities for public comment, the partners on June 28, 2000, signed *Chesapeake 2000*, which reaffirms the goals of past agreements and contains significant new goals and commitments to further restore and protect the Chesapeake Bay.

At its final meeting in December, the Commission, in addition to receiving subcommittee reports, was briefed on current environmental initiatives and issues by the Honorable John Paul Woodley, Secretary of Natural Resources, and on the most recent activities of the Bi-state Blue Crab Advisory Committee (BBCAC) by Russell W. Baxter, Virginia Director of the Chesapeake Bay Commission. Dennis Tracy discussed DEQ's efforts to develop Total Maximum Daily Loads (TMDLs) for impaired waters in Virginia and provided a further update on the development of the non-tidal wetlands regulations.

Among the on-going environmental initiatives cited by Secretary Woodley were (i) the implementation of the wetlands permit program; (ii) additional opportunities for land and open space conservation provided by federal and state tax credits and grants issued by the Virginia Land Conservation Foundation; (iii) DEQ's initiatives to promote the redevelopment of brownfields; (iv) strategies to assist localities in promoting low-impact development designs that limit impervious cover; (v) pollution prevention initiatives, including DEQ's Environmental Excellence Program; and (vi) increased emphasis on environmental education and the establishment of the Virginia Naturally 2000 Program. Secretary Woodley also identified issues likely to garner substantial attention and debate in coming months, water quality issues related to DEQ's efforts to develop TMDLs for impaired waters in Virginia and air quality issues related to the construction of new power plants in Virginia and the designation of additional nonattainment areas by EPA under the Clean Air Act.

The BBCAC met on December 13, 2000, and formally adopted an action plan for the management of the blue crab fishery, including recommendations for action. As Mr. Baxter explained to the Chesapeake 2000 subcommittee, the BBCAC is recommending that management thresholds and harvest targets for the blue crab fishery be adopted by Virginia, Maryland, and the Potomac River Fisheries Commission. The BBCAC will be submitting its action plan to the Chesapeake Bay Commission at its next meeting in January and expects to issue a report upon the Commission's approval. A more extensive discussion of the blue crab fishery and the BBCAC's recommendations for addressing those problems is included in the Chesapeake 2000 Subcommittee report.

During the past couple of years, DEQ began the task of developing TMDLs for impaired waters in Virginia. A TMDL, the amount of pollution a segment of water can handle without violating water quality standards, is required for all waters listed as impaired under the federal

Clean Water Act (CWA). Development of a TMDL involves a special study of an impaired stream segment that identifies all sources of pollution (point and nonpoint sources) contributing to a violation of water quality standards, calculates the contribution from each source, and calculates the reductions needed, by source, to attain water quality standards. Each step of the process involves consultation with stakeholders and opportunities for public participation. Once a TMDL has been developed and approved by EPA, the process to develop a TMDL implementation plan begins. After the TMDL implementation plan is approved by EPA and adopted by the State Water Control Board, the TMDL becomes part of the Water Quality Management Plan for the watershed where the impaired segment is located.

According to EPA's most recent report of impaired waters, issued in 1998, 603 waters in Virginia were listed as impaired: 247 waters were listed based upon monitoring by DEQ, 285 were listed for shellfish restrictions, and 71 were added by EPA, including the Chesapeake Bay and its six tidal rivers. Each impaired segment may be listed for more than one pollutant and a separate TMDL is required for each listed pollutant. In addition to the mandates of the CWA and provisions of state law, the development of TMDLs in Virginia is subject to a mandatory schedule established by a 1999 consent decree between EPA and environmental groups. Under that schedule, the number of TMDLs required each year varies; while only one TMDL was required in 1999 and only 12 in 2000, the number then begins to increase substantially, starting with 30 in 2002 and increasing to 213 in 2006. Between 2002 and 2010, DEQ must complete a total of 557 additional TMDLs. That figure does not include TMDLs for 200 additional waters that may be added to the 2002 report because of the consent decree. If DEQ fails to meet the schedule, EPA is required to step in and develop the necessary TMDLs.

The length of the TMDL process will pose major challenges to DEQ's ability to meet the schedule, particularly as the number of required TMDLs begin to increase. In addition, the TMDL process is expensive and a lack of adequate financial resources will also pose a challenge for DEQ. DEQ provided the Commission with a list of the TMDL costs, funds currently available, and the deficit in funding, which are shown in Table I.

Table I. TMDL Costs and Funding

Biennium	Costs 1	Funds 2	Deficit
2000-2002	4,884,610	3,427,500	1,457,110
2002-2004	12,328,800	3,699,000	8,629,800
2004-2006	14,040,340	3,699,000	10,341,340
2006-2008	15,478,380	3,699,000	11,779,380
2008-2010	12,331,260	3,699,000	8,632,260
Totals	59,063,390	18,223,500	40,839,890

1. Total costs for all agencies (DEQ, DCR and DMME) to develop TMDLs, but does not include costs for shellfish TMDLs and implementation.

2. Includes state funds in fiscal year 2001 and projected funds from EPA through 2010.

It should be noted that the costs cited in Table I reflect only the cost of developing TMDLs, not the cost of implementation to DEQ and to the various stakeholders. Substantial

concern has been expressed by the Virginia Association of Counties (VACO) and others over what the total cost of the TMDL process might be and what TMDL implementation might portend, cost-wise, for localities, the agricultural sector, and the regulated community. Clearly, policy decisions on how to provide the funding needed for the TMDL process will be required in the near future. Recognizing this fact, the Commission concluded that further examination of the TMDL process and its potential costs is needed over the coming year.

Drafts of DEQ's proposed regulations implementing the non-tidal wetlands permit program were submitted to and approved by the State Water Control Board at its meeting on December 13, 2000. DEQ expects to issue the proposed regulations for public comment during the first half of 2001 and to have final regulations in place prior to the October 1, 2001, deadline. DEQ has also begun to take the steps necessary to obtain SPGP authority from the U.S. Army Corps of Engineers. By granting such authority, the Corps will delegate its decision-making authority on wetlands to DEQ and the need for applicants to seek permits from two separate agencies will be eliminated. While the wetlands legislation allows DEQ until July 1, 2002, to obtain SPGP authority, DEQ would like to obtain approval by October 1, 2001, when the new regulations go into effect, to avoid a period of dual permitting.

To incorporate the new requirements for wetlands permits, DEQ is proposing to revise their Virginia Water Protection (VWP) Permit regulations. Under those proposed revisions, an individual VWP permit will be required for:

- Excavations in a wetland;
- Impacts in an isolated wetland; and
- New activities in a wetland that cause drainage, significantly alter or degrade existing acreage or function, or cause permanent flooding or impounding.

General VWP permits will be issued for activities with impacts of less than one acre, transportation projects, utility projects, and development and construction projects. Normal agricultural and silvicultural activities and residential lawn maintenance and use activities are exempt from permit requirements. To obtain a VWP permit, a proposed activity must avoid and minimize wetland impacts to the maximum extent practicable, consider the cumulative impact and impacts to fish and wildlife resources, and compensate (mitigate) for wetlands impacts to achieve a no net loss of wetlands acreage and function.

One of the results of the proposed revisions will be an increased use of general permits. It is estimated that approximately 90 percent of activities impacting upon wetlands will be covered by general permits. In response to concerns expressed by members of the Commission over the fact that upon final adoption general permits will not be subject to additional public hearing and comments, Mr. Treacy stressed that the proposed general permits were developed after extensive discussions and opportunities for comment from all stakeholders and interested parties. In addition, the proposed permits, which are very detailed in their requirements, are included in DEQ's proposed regulations and will be subject to further review and comment

through the administrative process. DEQ will continue to provide the Commission with updates on the proposed regulations and permits as the administrative process moves forward.

III. SUBCOMMITTEE ACTIVITES

A. SOLID WASTE SUBCOMMITTEE

During 2000, the Solid Waste Subcommittee held meetings in September and November to examine (i) the status of solid waste regulations, including those covering financial assurance for municipal solid waste management facilities, medical waste, and barge containers; (ii) landfill closures and closure costs; and (iii) strategies to reduce the amount of waste being deposited into landfills in the Commonwealth (SJR 133).

1. Status of Solid Waste Regulations

a. Financial Assurance For Solid Waste Management Facilities

As a result of financial assurance legislation considered by the 2000 Session of the General Assembly, DEQ made a number of regulatory changes in how landfill operators could demonstrate that they had sufficient financial resources to properly close their landfills. The proposed changes will be subject to a 60-day public comment period to begin in January 2001. The new regulation would (i) repeal the use of captive insurers, the use of which was prohibited under recently passed legislation (HB 1022, 2000 Session), and (ii) require financial assurance for transfer stations (HB 1023). A "tiered" financial test will be instituted that requires a locality operating a landfill to establish a restricted fund to finance closure costs if its environmental liabilities exceed 20 percent of its annual revenues. The amount to be set aside in such a fund will be based on the following formula: the closure costs minus the funds available, divided by the anticipated remaining life of the landfill. If the environmental liabilities do not exceed 20 percent of annual revenues, no funds would have to be set aside. Under this new 20 percent standard, seven landfills will have to set aside funds to cover closure costs (Appendix D). The new regulation would:

- Require the submission of an annual report on plans to provide closure costs and the amount of money that is available for landfill closure;

- Require coverage for corrective action once ground water protection standards are exceeded. Financial assurance of $1 million would be required for corrective action until the actual remedy is selected; and

- Remove the use of "other" financial assurance mechanisms because DEQ has already identified those mechanisms that are likely to be used.

These changes address the two concerns raised by the legislature: that there be greater availability of funds for closure and that financial assurance for corrective action be provided earlier in the process.

b. Regulated Medical Waste

Because of concerns of the Hospital Association regarding the definition of regulated medical waste and the scope of the current regulations, the Commission has received periodic reports on DEQ's interpretation and implementation of these regulations. DEQ established a technical advisory committee to review possible regulatory changes in the program. The agency is anticipating presenting the proposed changes to the Virginia Waste Management Board at its December 15, 2000, meeting and then receiving public comments in 2001. In general, the proposed changes:

- Simplify regulatory requirements;
- Create a streamlined permitting process for management facilities by using a permit by rule (general permit); and
- Consider clarifications to the definitions of regulated medical waste. One point of contention between the industry and the agency is whether urine posses a health risk and therefore should be classified as regulated medical waste.

c. Barge Regulations

The Solid Waste Barge Regulations were open for public comment during the 60-day period between September 11, 2000, and November 11, 2000. A public hearing was held by the Solid Waste Management Board on September 10th, during which 15 comments were received. The comments ranged from what the container requirements should be, and the authority of the Board to regulate barges, to a preference for banning barges. Several members of the subcommittee expressed the view that the regulations should reflect the legislature's intent that the containers be leakproof. DEQ has attempted not to prescribe a particular container design but rather a desired result and the agency has proposed a leakproof standard that requires that the container "hold up to 24 inches of water for 15 minutes without leaking." The subcommittee questioned whether this standard met the legislative intent of the statute and suggested that DEQ consider developing a more stringent "leakproof" standard for barge containers.

2. Landfill Closure Costs

In response to questions raised by subcommittee members regarding the closure costs for those landfills having to close earlier than planned, DEQ presented an analysis of the number of landfills being asked to close, the costs of closing these landfills and how much money is available for the proper closure of landfills (Appendix E). Of the 40 local government landfills, 11 have set aside 100 percent of the closure costs, 18 have some funds set aside and 11 landfills have not set aside any funds. The total closure costs for "1205" landfills is $37 million and the closure costs for combination landfills, those landfills containing both "1205" cells and newer, upgraded portions, is $63.7 million. According to a 1999 Virginia Association of Counties (VACO) survey and a DEQ phone survey, $27.6 million has been set aside for the closure of "1205" landfills, a current shortfall of $9.5 million, and $25 million has been set aside for combination landfills, a shortfall of approximately $38 million.

Based on a DEQ risk assessment, the 11 landfills (six "1205s" and five combination) shown in Table II will be required to close earlier than the localities had projected.

Table II. Landfill Closure Dates

	DEQ Mandated Closing Date	Original Closing Date
"1205" Landfills		
Lunenburg	2005	2015
Mecklenburg	2005	2010
Orange	2005	2015
Rockbridge	2005	2008
Wise	2020	2029
Combination Landfills		
Accomack	2005	2018
Petersburg	2005	2007
Greensville	2010	2017
Shoosmith	2010	2016
Virginia Beach	2010	2015

The earlier closing dates for these landfills will place greater pressure on the operators to set aside more funds to finance the costs of closure. Currently, according to the VACO and DEQ surveys, it will cost an estimated $21 million to close these 11 landfills. The operators have so far set aside $4.4 million. Four of the localities have not, as yet, set aside any funds. Making funds available for closure is even more crucial for the six localities whose landfills are mandated for closure by 2005. The costs of closure for these landfills will total approximately $9.1 million. The amount set aside or currently available is $1.6 million, leaving a shortfall of $7.5 million. Clearly, while there are localities that have recognized the fact that they will have to close their landfills well before their anticipated closure date and have adopted a plan for financing the accelerated closure, others have not made a significant commitment of financial resources to pay for the costs involved in properly closing their landfill. Faced with the possibility that several localities will have difficulty raising the necessary funds to meet the state's accelerated closure dates, the subcommittee suggests that a policy decision will have to be made as to what, if any, role the state should play in providing financial assistance for the closure of these landfills.[1]

3. Senate Joint Resolution No. 133

The 2000 Session of the General Assembly passed SJR 133 requesting the Commission to examine strategies to reduce the amount of solid waste being deposited in landfills. The subcommittee was given the responsibility of conducting the study and reporting its findings and recommendations to the full Commission. The subcommittee began by reviewing DEQ's solid

[1] Mr. Treacy's letter contained in Appendix D is a response to the subcommittee's discussion of the role the state should play in assisting those localities that will be required to accelerate the closure of their landfills.

waste reduction program, as well as other recycling and litter control efforts. Mike Murphy, Director of Environment Enhancement for DEQ, discussed the state's recycling effort. In 1989, legislation was enacted that required localities or regional solid waste planning units to attain a recycling rate of 25 percent by 1995. This was to be done in a phased-in approach with localities or regional solid waste planning units recycling 10 percent of their waste stream by 1991, 15 percent by 1993, and 25 percent by 1995. For each of the target years, the recycling rate actually exceeded the mandated rate, as the achieved rate was 19 percent in 1991, 33 percent in 1993, and 35 percent in 1995. In 1995, legislation was passed that extended the 25 percent rate through 1997. The actual state recycling rate has remained at the 35 percent level achieved in 1995. When asked by the subcommittee whether there are measures that might enhance recycling activities, Mr. Murphy responded that any new recycling initiatives should focus on those materials in the waste stream that are still being disproportionately deposited in landfills such as paper and paper products. He also suggested that composting should be promoted as a recycling practice.

Another DEQ waste reduction initiative is the Waste Tire Management Program. The program, which began in 1990, is financed with the revenue generated from a fee of 50 cents placed on each tire sold at retail. The fee generates between $2.5 and $3 million annually, which is deposited into a special fund to be used to clean-up old tire piles, stem the "current flow" of used tires, and provide for the long-term storage of tire chips. DEQ has identified 901 tire piles statewide containing 22 million tires, with an estimated clean-up cost of $32.4 million. Since 1992, 522 piles containing 13 million waste tires have been cleaned-up at a cost of $6.7 million. Three hundred seventy-nine piles containing 8.5 million waste tires still remain to be cleaned-up. "Current flow" includes those tires that are discarded and replaced with new tires. These tires typically are transported to regional processing centers, where the tires are processed into various types of "end uses," such as fuel supplements for producing energy, daily cover for landfills or recycled products. Persons or companies are partially reimbursed for processing the used tires into these "end uses." For fiscal year 2000, $48,350 was expended for the clean up of tire piles, $1.4 million for current flow tires processing and $435,000 for long-term storage.

There have been several administrative changes in the agency's recycling program. The predecessor agency to DEQ, the Department of Waste Management, included the Division of Litter Control and Recycling. This Division, with its sizeable staff, assisted in market development activities and awarded litter control grants. In 1995, the agency was reorganized, the Division was abolished and its functions were decentralized. The litter control and recycling activities of the agency had been funded by the Litter Tax. The revenues generated from this tax paid by beer wholesales, soft drink manufacturers and distributors and various segments of the retail industry were transferred to the newly created Litter Control and Recycling Fund. Monies in the fund, by statute, are expended in the following manner: (i) 75 percent is awarded to localities for local litter prevention and recycling grants; (ii) 20 percent is disbursed competitively for statewide and regional litter prevention and recycling educational programs; and (iii) five percent is allocated to DEQ for administrative expenses. In fiscal year 2000, the Litter Tax generated $1,783,682, of which $1,380,688 was awarded to 273 localities for litter control and recycling programs, $366,800 for statewide education grants, and $91,765 for DEQ administrative expenses.

The General Assembly established the Litter Control and Recycling Fund Advisory Board to advise DEQ in the disbursement of monies from the Fund. The advisory board is charged with (i) reviewing applications received by DEQ for grants from the Fund and making recommendations to the Director for the award of all grants, and (ii) promoting the control, prevention and elimination of litter and encouraging the recycling of discarded materials. The director of the advisory board, Mr. Denny Gallager, explained the advisory board's role. He noted that while the director of DEQ makes the final award, the advisory board recommends the specific projects that should be funded. He pointed out that almost $1.4 million in grants to local governments were leveraged with approximately $4 million in matching funds from both private and public sources and $3.6 million in in-kind services, for a return on the initial investment of approximately 540 percent. He suggested that this use of the litter tax, when combined with the various local commitments, results in a unique public-private partnership.

The advisory board plays a more significant role in the distribution of the 20 percent of the litter tax that is allocated for statewide or regional litter prevention or recycling education grants. It has developed a set of weighted criteria that are used in making its recommendations to the director of DEQ for the awarding of educational grants. For fiscal year 2001, the advisory board recommended nine grants totaling approximately $320,000. These projects involve teacher training, a highway litter prevention program, the Clean Virginia Waterways and Adopt-a-stream program, comprehensive training opportunities for local litter prevention and recycling coordinators, and an educational program aimed at the proper disposal of household waste. Since the advisory board's first grant award in fiscal year 1997, almost $1.7 million in educational grants have been disbursed to public and private sector applicants for litter control and recycling educational projects. Mr. Gallagher concluded his remarks by suggesting that effective recycling campaigns result in less waste being deposited in Virginia and that aggressive anti-littering programs will mean that Virginia will remain a beautiful place in which to live and work.

In an effort to remove the barriers to recycling and create markets for recycled products, the General Assembly established the 19-member Virginia Recycling Markets Development Council (VRMDC). The Council is composed of representatives of local and state governments and private sector associations. Among its duties, the Council is to:

1. Promote and coordinate state agencies' and authorities' efforts to enhance markets for recycled or recovered materials;

2. Promote the products made from recycled or recovered material;

3. Identify and evaluate financial and other incentives that may attract new businesses that can use recycled or recovered materials;

4. Identify barriers to the development of markets for recycled materials, including existing state policies, regulations and procedures, and recommend alternatives to overcome such obstacles; and

5. Promote and encourage public/private market development initiatives.

Mr. Michael Benedetto, a member of VRMDC, discussed the accomplishments of the organization and offered VRMDC's recommendations to enhance recycling efforts in the Commonwealth. Among its achievements VRMDC has (i) increased the public's awareness about recycling, (ii) worked with DEQ to develop a system for the reporting of materials being recycled, and (iii) determined the frequency in which material is collected for recycling or otherwise disposed of. On behalf of the VRMDC, Mr. Benedetto requested that the Commission endorse the following:

- Continuation of the Recycling Machinery Tax. This tax credit has provided a financial incentive to individuals and companies wishing to establish a recycling business and enhance recycling efforts in the Commonwealth;

- Employment of a full-time recycling coordinator to promote Virginia as a "recycling friendly" state. Currently, several agencies are involved in recycling efforts. The Department of General Services has an individual who is responsible for the purchasing of recyclable materials. The Department of Business Assistance employs a person who provides assistance to all types of businesses, including those engaged in recycling. The Virginia Department of Transportation is involved in the purchase of materials containing recycled content. VRMDC believes that a recycling coordinator is needed to (a) coordinate recycling efforts, (b) proactively pursue new recycling market development opportunities, and (c) assist local and regional recycling efforts. Mr. Benedetto stated that such a position might be funded by a user fee imposed on waste being deposited in Virginia's landfills. He pointed out that Pennsylvania has received $32 million in revenue through a two-dollar-per-ton disposal fee that is used to fund state recycling programs. A similar fee would generate about $26 million in revenue for Virginia. He observed that this level of funding would enable the Commonwealth to hire a recycling coordinator and implement programs that would increase the state's recycling rate;

- Increasing the state mandated recycling goal of 25 percent. The 25 percent recycling rate is among the lowest in the United States and sends the wrong message, according to Mr. Benedetto. He noted that recycling or waste diversion rates of neighboring states exceed that of Virginia's. For example, North Carolina's current mandated recycling rate is 40 percent with a phased-in increase to 60 percent; and

- Promotion of tax incentives and credits to encourage recycling and recycling market development.

Because of Virginia's comparatively low recycling rate and the importation of large amounts of solid waste, VRMDC believes these recommendations, if implemented properly, would have a significant impact on the amount of solid waste that could be diverted from Virginia landfills. While the subcommittee finds that Virginia is currently meeting the mandated recycling goal, it agrees with VRMDC that there are additional actions/initiatives that, if implemented, would enhance the state's ability to divert significant portions of the waste stream from Virginia's solid waste landfills. The subcommittee believes VRMDC, with its expertise in

solid waste management and recycling, would be the appropriate body to continue to examine the provisions of SJR 133. Specifically, the subcommittee requests that VRMDC conduct a more detailed analysis of the issues discussed in SJR 133 and report its findings and recommendations to the Commission by June 2001 (See letter, Appendix F).

B. PARKS AND LAND USE SUBCOMMITTEE

As part of its deliberations on state parks and land conservation matters, the Parks and Land Use Subcommittee held meetings in Virginia Beach at First Landing State Park on November 8 and 9 and in Richmond on December 18, 2000. At its initial meeting, the subcommittee toured the facilities and received briefings about the various programs at First Landing State Park in Virginia Beach and Kiptopeke State Park in Northampton County.

1. State Parks

As part of an ongoing review of the State Parks System, the subcommittee received a presentation from Joe Elton, State Parks Director, on the current and anticipated funding needs for the operation and maintenance of state parks.

The subcommittee and the Commission have long recognized that Virginia state parks contribute greatly to the quality of life in Virginia. From an economic perspective, state parks generated between $114 million and $128 million in 1990 for the state and local economies. Just as important as the economic contributions, however, are the numerous non-economic contributions of state parks to the quality of life in Virginia, including the preservation of Virginia's cultural heritage and the preservation of open space. An increasing number of Virginians are taking advantage of the many services that the state parks have to offer. Attendance at state parks increased from 3.7 million visitors in 1990 to almost 6 million visitors in 1999. Cabin reservations increased from 3,626 in 1995 to 11,990 in 2000, and camping reservations increased from 16,186 in 1995 to 33,014 in 2000. Mr. Elton indicated that the fees charged for these overnight services are highly competitive with, and in many cases less expensive than, those charged at privately run operations. In addition, surveys returned by park visitors to the Department of Conservation and Recreation (DCR) since 1997 indicate a steady and significant improvement in customer satisfaction with park facilities and services.

The funding and staffing needs of state parks have been a major focus of the Commission and the subcommittee in recent years. Despite repeated attempts by the Commission and members of the General Assembly to address the financial needs of state parks, state parks remain underfunded in a number of important areas, especially regarding preventive maintenance and operational expenses. The subcommittee was presented with information concerning funding for state parks in Virginia as compared with park funding in other states. Virginia ranks fiftieth out of 50 states in both the percentage of the state budget allocated to parks and the per capita spending for state parks. Virginia ranks higher for state park self-sufficiency, a measure of the percentage of a state park system's operating budget derived from park-generated revenues. In this category Virginia ranks thirty-first out of 50 states.

While the information provided to the subcommittee indicates that Virginia receives an excellent return on the funds spent for the operation and maintenance of state parks, the subcommittee concluded that funding for state parks needs to be a greater priority in Virginia.

a. Rebenchmarking Funds

One of the issues identified by the subcommittee in the past in critical need of review is the issue of rebenchmarking of funding for state parks. Current funding levels for state parks have not been adjusted to reflect the increasing costs to operate and maintain the parks due to inflation and the expansion of facilities and services. Should these financial needs go unaddressed, the long-term stability of the State Park System may be affected. In response to the subcommittee's inquiries as to the funding levels needed, Mr. Elton provided information shown in Table III on the budgetary needs of state parks for the next two fiscal years.

Table III. Budgetary Needs: State Parks

Operating Funding Needs:	First fiscal year	Second fiscal year
Wages	$986,506	$1,011,169
Other Than Personal Service (supplies, materials, etc.)	$1,372,744	$1,413,926
Staffing (112 additional staff)	$3,360,000	$3,360,000
Preventive Maintenance	$1,500,000	$1,500,000
Vehicles and Equipment	$4,984, 300	$1,000,000
Total:	**$12,203,550**	**$8,285,095**
Capital Funding Needs:		
Maintenance Reserve	$8,000,000	$8,000,000
Capital Improvements (est.)		$181,710,000
Total:	**$8,000,000**	**$189,710,000**

Members of the subcommittee inquired as to the effect that decreased state revenues and "productivity savings" within DCR will have on state parks. Leon App, Acting Deputy Director of DCR, estimated that DCR's funding level during the fiscal year 2000-2001 biennium would be reduced by approximately $1 million, but that he could not estimate what percentage of this $1 million would come from the Division of State Parks.

Another area that has been previously examined by the subcommittee is the need for increased staffing at state parks. In previous years, the subcommittee has recommended that a number of new positions within the Division of State Parks be funded by the General Assembly; however, not all of these positions have been funded. Mr. Elton reported that there are 112 critically needed positions, including park managers, chief rangers, rangers, and business and maintenance managers, at parks throughout Virginia. Members of the subcommittee noted that the Division of State Parks is fortunate to have a dedicated group of employees who often go beyond what is expected of them to ensure that the park system is operated in a professional manner and that if these additional positions continue to go unfunded, the morale of the state parks employees might suffer.

In light of these needs, it was the recommendation of the subcommittee that budget amendments be prepared to address the operational and maintenance reserve funding needs of the State Parks System. The subcommittee also recommended that, during consideration of the next biennial budget, funding levels for state parks be reassessed and rebenchmarked to adequately cover the future financial needs of Virginia's state parks.

One additional issue affecting state parks employees examined by the subcommittee was the need to include certain employees in the Virginia Law Officers' Retirement System (VALORS). While all park managers, assistant park managers and chief rangers are required to be conservation officers and must satisfactorily complete the Basic Law Enforcement Training Course provided by a Department of Criminal Justice Services-certified training academy, these individuals are not currently eligible to participate in VALORS. The subcommittee discussed amending the qualifications for participation in VALORS to allow those state park employees with law enforcement responsibilities to be eligible. The subcommittee also noted, however, that the General Assembly may reassess and adjust the standards for inclusion in VALORS during the 2001 Session.

The subcommittee recommended that the Commission support the position that (i) if the General Assembly does not make a major revision of the criteria for inclusion in VALORS during the 2001 Session, the VALORS program should be expanded to include those state park employees with law-enforcement responsibilities; or (ii) if the VALORS criteria are modified during the 2001 Session, the inclusion of these employees should be considered as the new criteria are established.

b. Chippokes State Park/Chippokes Plantation Farm Foundation

Senator Frederick Quayle, chairman of the board of trustees of the Chippokes Plantation Farm Foundation, made a presentation to the subcommittee on the proposed development and expansion of facilities at Chippokes Plantation. The Foundation hopes to expand and update the existing facilities at Chippokes as follows: (i) establish a restoration village demonstrating agricultural life in Colonial Virginia; (ii) construct a pier into the James River to enable those traveling by boat on the James River to visit the park and the facilities; and (iii) expand the existing Farm and Forestry Museum into a Farm and Forestry Center. The Farm and Forestry Center is designed to be a "hands-on" facility that will have exhibits addressing the history of agriculture in Virginia and examining some of the future challenges for Virginia's farmers, including exhibits on the biotechnological uses of tobacco and the care of equestrian and farm animals. The Foundation plans to have the construction of the Farm and Forestry Center completed prior to the Jamestown 2007 celebration so that those visiting the area for the celebration can also visit the Center.

Senator Quayle reported that a number of the preliminary steps in the construction of the Center have been completed or are currently underway. The Foundation estimates that the total cost of the project will be approximately $28 million. While the Foundation hopes to raise most of these funds from private sources, it is anticipated that the Foundation will seek some funding from the General Assembly in the future to complete the project. Members of the subcommittee

were supportive of the project and asked that they be kept apprised of the progress of the construction of the Center and be notified as to any future funding needs.

2. Land conservation

At its second day of meetings at First Landing State Park, the subcommittee received presentations about the many land conservation programs and projects underway in Virginia. In prior years, the subcommittee has supported the creation and expansion of programs designed to conserve land in Virginia, including the Virginia Land Conservation Foundation and the Virginia Outdoors Foundation, and has sought increased funding for land conservation efforts. Many of those recommendations have been adopted by the General Assembly.

The subcommittee received an update from Leon App on the activities of the Virginia Land Conservation Foundation (VLCF) during the past year. During the 2000 Session, the General Assembly modified the allocation of funds from the Virginia Land Conservation Fund. Twenty-five percent of the monies in the Fund are transferred to the Open-Space Lands Preservation Trust Fund, which is administered by the Virginia Outdoors Foundation. The remaining 75 percent of the monies is divided equally among natural area protection, open spaces and parks, farmlands and forest preservation, and historic area preservation. Mr. App provided a balance sheet of VLCF's activities, including a summary of the distribution of monies under the modified allocation formula.

During fiscal year 2000, VLCF also administered federal funds for the acquisition and preservation of Civil War Battlefields in Virginia. Through the assistance of these federal funds, monies appropriated by the General Assembly, and private funds, perpetual conservation easements were acquired at the Kernstown, Cedar Creek, Brandy Station, Third Winchester, and Cedar Mountain Battlefields.

Estelana Thomas, Conservation Easement Specialist with the Virginia Outdoors Foundation (VOF), updated the subcommittee on the progress of VOF in obtaining conservation easements on properties in Virginia. Ms. Thomas reported that the land conservation programs administered by VOF continue to grow rapidly. Currently, there are 779 properties under easement that contain more than 146,000 acres. According to Ms. Thomas, the success of the programs can be attributed to (i) the work of private conservation groups, estate planning attorneys, and accountants in notifying landowners of the benefits of conservation easements; (ii) the establishment of a Virginia state tax credit in 2000 encouraging land conservation; (iii) new federal estate tax benefits that became effective in 1998; and (iv) the increasing belief of many landowners that the preservation of open space is important. VOF has been able to work in partnership with federal and state programs to maximize funding resources and is looking for additional public and private partnerships to increase the number of acres in Virginia under conservation easements.

The subcommittee was also presented with information on the Conservation Reserve Enhancement Program (CREP), a new program that is available to help meet Virginia's land conservation goals. The goal of CREP is to improve water quality and wildlife habitat by offering financial incentives to agricultural landowners to restore riparian buffers, native warm

season grass filter strips, and wetlands on environmentally sensitive land. The program has $91 million in funding committed to it, including $68 million in federal funds. Virginia has committed more than $8 million for fiscal year 2000 and fiscal year 2001 to the program. Participants in the program are eligible for a cost-share reimbursement from the United States Department of Agriculture Farm Service Agency, DCR, the Chesapeake Bay Foundation, and Ducks Unlimited. It is hoped that 25,000 acres in the Chesapeake Bay watershed and 10,000 acres in the Southern Rivers area will be enrolled in the program.

An update on the efforts of the land conservation community to secure funding for land conservation efforts was presented by Nicole M. Rovner, Director of Government Relations for The Nature Conservancy. Ms. Rovner stated that, while there has been significant progress in obtaining funding and creating mechanisms for the protection of open space, more needs to be done. The Land Conservation Coalition, an association of private entities seeking to preserve land in Virginia, has recommended that a dedicated source of funding be established to fund public land conservation efforts. In previous years, the subcommittee has recommended that such an approach be adopted in Virginia. During the 2000 Session of the General Assembly, legislation was introduced to set aside $40 million of the proceeds from the land recordation tax for open space purposes. These funds would be allocated to VLCF. The legislation creating a dedicated source of funding was carried over and is currently before the Senate Finance Committee.

The subcommittee recommended that the Commission support the approach contained in the legislation introduced during the 2000 Session calling for the creation of a dedicated source of funds for land conservation efforts in Virginia. As legislation creating a dedicated source of funding would not provide funding to VLCF until fiscal year 2003, the subcommittee recommended that additional funds be allocated for land conservation prior to that time. Specifically, the subcommittee recommended that budget amendments be introduced allocating $2 million during fiscal year 2002 to VLCF, with the condition that the portion of this amount that is designated by statute for farmland preservation be used for local purchase of development rights programs through the Virginia Agricultural Vitality Program administered by the Department of Agriculture and Consumer Services.

Finally, the subcommittee received a report on the Virginia Outdoors Plan, a guidance document for meeting Virginia's outdoor recreation and open space needs. The Virginia Outdoors Plan contains an inventory of the outdoor recreation resources in the Commonwealth and the results of a survey conducted regarding the use of outdoor resources in Virginia. The results of the survey indicate that the public believes that Virginia should expand and acquire new facilities to complement those resources already operated by the Commonwealth. DCR hopes to use the information obtained from the survey to determine funding needs and assist in planning for future facilities and services. Members of the subcommittee requested that DCR provide the subcommittee and the Commission with the final version of the Plan when it is completed.

C. CHESAPEAKE 2000 SUBCOMMITTEE

As part of its charge to review the provisions of *Chesapeake 2000* (Attachment G) and to examine the need for urban BMPs (SJR 217), the Chesapeake 2000 Subcommittee held meetings on October 17 and November 29, 2000. During those meetings, the subcommittee (i) reviewed the provisions of *Chesapeake 2000*, (ii) examined current programs designed to restore and protect the health of the Chesapeake Bay, and (iii) identified issues that might require action during the 2001 Session of the General Assembly. The subcommittee was also briefed about the reasons for the request to study the need for urban BMPs and examined existing programs to control nonpoint source pollution.

1. Chesapeake 2000

Russell W. Baxter, Virginia Director of the Chesapeake Bay Commission, provided the subcommittee with a detailed overview of the goals and a number of the key commitments contained in *Chesapeake 2000* and representatives of the agencies under the Natural Resources Secretariat with responsibility for some aspect of the restoration and protection of the Chesapeake Bay discussed how they are planning to coordinate their activities. Agency representatives also provided briefings about existing efforts to restore and protect the Chesapeake Bay and its resources and how those efforts will need to be enhanced to meet the new commitments.

The goals of *Chesapeake 2000* cover five areas: (i) living resource protection and restoration, (ii) vital habitat protection and restoration, (iii) water quality protection and restoration, (iv) sound land use, and (v) stewardship and community development. Within each of those areas, the agreement contains numerous commitments for action with deadlines ranging from 2001 to 2012. Each of the goals is interdependent upon the others and actions taken to meet the commitments in one area have consequences for each of the others. Mr. Baxter stressed that while many of the commitments might seem aggressive, the partners to the agreement considered them to be necessary to the success of the main objective of the agreement, the removal of the Chesapeake Bay from the federal list of impaired waters by 2010.

Because *Chesapeake 2000* is much more comprehensive than previous Chesapeake Bay agreements, its implementation will be complicated, requiring extensive coordination between at least 15 state agencies. An interagency working group that has been in existence and working on Chesapeake Bay restoration issues for a number of years has been expanded to include four additional agencies, including the Virginia Department of Transportation (VDOT) and the Virginia Economic Development Partnership. The working group has been meeting to identify common tasks and coordinate among the agencies, with different agencies planning to take the lead on different issues. Through the Chesapeake Bay Program, administered by the Chesapeake Bay Commission, the working group will also be coordinating with their counterparts in the other states. As implementation progresses, the working group plans to increase coordination with key committees of jurisdiction in the General Assembly, and outside entities such as planning district commissions, local governments, interest groups, and others.

The subcommittee questioned whether there was any requirement for the Secretary of Natural Resources to report annually on the progress made in meeting the goals and commitments of *Chesapeake 2000.* Dennis Treacy responded that while reports on certain aspects of the agreement would be included in the Secretary's annual report on tributary strategies, there was no specific requirement for a separate report. The subcommittee discussed the importance of keeping track of the various programs and initiatives undertaken and the progress made toward meeting the agreement and recommended that legislation be introduced to require the Secretary of Natural Resources to submit an annual report to the General Assembly on specific progress made toward implementing the provisions of *Chesapeake 2000.* To be included in that report is a description of the programs, activities, and initiatives of state and local governments developed and implemented to meet each of the goals and commitments.

a. Living Resource Protection and Restoration

The recognition that living resources are key to a healthy Chesapeake Bay is the premise behind the goal to restore and protect finfish, shellfish, and other living resources. In an effort to meet this goal, *Chesapeake 2000* contains commitments aimed at restoring and protecting native oysters, managing the blue crab fishery, restoring passage for migratory fish to blocked spawning habitats, and addressing the dangers to the Chesapeake Bay posed by exotic species.

Among the more ambitious of the commitments is that of achieving a 10-fold increase in native oysters in the Chesapeake Bay by 2010. The population of the oyster, which serves as a water filter and assists in improving water clarity, has declined drastically due to overharvest, disease, and loss of habitat. To begin to reverse this decline, the Virginia Marine Resources Commission (VMRC) in the early 1990s constructed a number of small, three-dimensional oyster reefs in several areas of the Chesapeake Bay. Oyster survival and reproduction have vastly improved on those reefs and, in 1999, DEQ and VMRC established the Oyster Heritage Program, a partnership of state and federal agencies, non-profit organizations, watermen, and business groups to expand upon that success.

Phase I of the Oyster Heritage Program, construction of three-dimensional broodstock sanctuary reefs and creation of harvest areas surrounding those reefs, is underway in the lower Rappahannock River. In response to questions from the subcommittee about whether the program will be expanded to other areas, Mr. Treacy explained that expansion of reef construction beyond the lower Rappahannock will require additional funding. Construction of each reef site costs nearly $400,000 and monitoring and educational activities are expected to cost an additional $75,000 per year. The federal government has made $4.3 million available to Virginia and Maryland for oyster restoration; however, a state match is required. Because Virginia has less than half of the amount required, a request for $500,000 has been submitted for inclusion in the Governor's budget. Noting the importance of continuing with oyster restoration efforts, the subcommittee recommended that to the extent that the requested funds are not included in the Governor's budget, the Commission endorse the introduction of a budget amendment of up to $500,000.

To improve the condition of the blue crab fishery, *Chesapeake 2000* includes the commitment to establish harvest targets and implement complementary management strategies

for the blue crab. Due principally to overfishing, fluctuations in water quality, and the disappearance of bay grass habitats, stocks of the blue crab, the Chesapeake Bay's most valuable fishery resource, have declined precipitously. To combat that decline, the Maryland and Virginia legislatures each allocated $150,000 for fiscal year 1999 to the Bi-state Blue Crab Advisory Committee (BBCAC), an advisory group established by the Chesapeake Bay Commission, to fund an extensive two-year study of the blue crab fishery and how it is managed. As a result of that study, the BBCAC issued a series of consensus statements that included the recommendation that management thresholds and harvest targets aimed at ensuring a sustainable crab population into the future be adopted by Maryland, Virginia, and the Potomac River Fisheries Commission. The BBCAC is holding a series of meetings to receive public comment and expects to adopt a formal action plan at a meeting in December 2000.

When asked by the subcommittee whether the Commission should consider recommending legislation requiring the adoption of specific thresholds and targets, Mr. Baxter responded that the preferred approach would be for VMRC to adopt thresholds and targets that provide for the flexibility necessary to meet changing conditions in the fishery. He went on to suggest that the Commission consider supporting the request of the Virginia delegation to the Chesapeake Bay Commission for $200,000 to fund further examination by the BBCAC of several important issues pertaining to the blue crab fishery, including the effects that predation, a decline in water quality and underwater habitat, and recreational crabbers have had upon the fishery. The subcommittee agreed and recommended that the Commission endorse the preparation of a budget amendment of up to $200,000 to the extent that funds for the BBCAC are not included in the Governor's budget.

Commitments aimed at opening passage to blocked spawning habitats for migratory fish include the commitment to identify the final initiatives necessary to meet the current goal of restoring passage to more than 1,350 miles of blocked habitat and the commitment to establish new fish passage goals for both migratory and resident fish. David Whitehurst, Director of Wildlife Diversity for the Department of Game and Inland Fisheries (DGIF), reported that through the Fish Passage Program, blockages have been removed at several dams along key Chesapeake Bay tributaries and access restored to over 190 miles of habitat.

While a majority of the projects needed to open the 229 additional miles required to meet the existing fish passage goal have been identified, a lack of funding for the Fish Passage Program for fiscal year 2002 threatens those projects. One particular project in jeopardy is the construction of a fishway at the Ashland Mill Dam on the South Anna River, which would open up an additional 37 miles of habitat. A request for $150,000 for that project has been submitted to the Governor and the subcommittee recommended the preparation of a budget amendment to appropriate that amount if the requested funds are not included the Governor's budget.

To address the negative impact of exotic species introduced into the Chesapeake Bay through ballast water exchanges from incoming ships, *Chesapeake 2000* includes commitments to identify exotic species that have the potential to cause harm to the Chesapeake Bay's ecosystem and to establish a Bay Program Task Force to work cooperatively with the U.S. Coast Guard, the ports, the shipping industry, and others at the federal level to reduce the introduction of exotic species through ballast water and to assist the states in developing voluntary ballast

water management plans. As a first step, the Maryland legislature last year enacted a bill requiring that ballast water exchanges occurring in Maryland waters be reported. A similar bill has been drafted for possible introduction during the 2001 Session of the General Assembly and submitted for comment to Virginia Port Authority officials and other interested parties. Because the bill had not been finalized by the final meeting of the subcommittee, its endorsement by the subcommittee was not requested.

b. Vital Habitat Protection and Restoration

In an effort to meet the goal of protecting and restoring the habitats and natural areas upon which the Chesapeake Bay's living resources depend, *Chesapeake 2000* includes commitments to restore and protect submerged aquatic vegetation (SAV), tidal and non-tidal wetlands, and forests.

Commitments aimed at restoring SAV include a recommitment to the existing goal of restoring 114,000 acres of SAV and the commitment to establish new goals and strategies for additional SAV restoration. Due mainly to problems with water clarity, the amount of SAV (bay grasses and sea grasses), which provides essential habitats for juvenile fish and blue crabs, has been declining. Recent initiatives to improve water quality, including measures implemented to reduce nutrients and control sediments, have begun to reverse that decline. The Virginia Institute of Marine Sciences (VIMS) has been working with the Virginia delegation to the Chesapeake Bay Commission to conduct research on SAV replenishment and received an appropriation of $80,000 for fiscal year 2001 to support that research. Additional research is needed, however, and no additional funds were appropriated for fiscal year 2002. The subcommittee noted the need for continued SAV research and recommended that a budget amendment be prepared to appropriate $80,000 to VIMS to support such research.

Among the commitments to restore and protect wetland habitats are those to achieve a no-net loss of existing wetlands acreage and function and to achieve a net resource gain in acreage by 2010 through the restoration of 25,000 acres of tidal and non-tidal wetlands. The full implementation of the non-tidal wetlands regulatory program should allow Virginia to meet the commitment of a no-net loss of existing wetlands. To meet the commitment of a net resource gain, it is estimated that approximately 6,000 additional acres of wetlands in Virginia will need to be restored. Efforts are currently underway through the new, federally funded Conservation Reserve Enhancement Program (CREP) to reclaim agricultural lands formerly converted from wetlands. It is anticipated that close to 3,000 acres of wetlands will be restored through CREP and that the voluntary, cooperative approach taken by CREP can be used as a model for initiatives to restore the remaining 3,000 acres. The subcommittee identified the need to continue oversight of the wetlands regulatory program as a priority during the coming year.

To protect and restore forests along streams and shorelines, *Chesapeake 2000* contains commitments to ensure that measures are in place to meet the existing goal to restore 2,010 miles of riparian forest buffers by 2010 and to conserve existing forests along streams and shorelines. Rapid growth and development in the watershed has resulted in a decline in the mileage of forest buffers, which assist in improving water quality by reducing run-off, trapping sediment and pollution, preventing erosion, and regulating water temperature. While a number of measures

instituted in recent years should assist Virginia in fulfilling the restoration commitment, concerns have been raised about the adequacy of efforts to conserve existing forest buffers, particularly in areas subject to the Chesapeake Bay Preservation Act (§ 10.1-2100 et seq.). Under the Chesapeake Bay Preservation Act, the 84 localities that comprise Tidewater Virginia are required to implement requirements that protect water quality, including the preservation of forest buffers, in environmentally sensitive corridors draining to the Chesapeake Bay. Forestry operations are exempted from those local requirements if such operations are employing forestry best management practices (BMPs), including the use of streamside management zones (SMZs) to preserve forest cover and control erosion, in accordance with guidance issued by the Department of Forestry (DOF).

In response to subcommittee questions, Michael Clower, Director of the Chesapeake Local Assistance Department (CBLAD), which administers the Chesapeake Bay Preservation Act, explained that CBLAD has received reports of incidents where SMZs were not maintained as recommended, including one or two instances where trees were clear cut down to the water's edge. The root of the problem appears to be a lack of adequate communication between DOF, CBLAD, and the local governments. While local governments have responsibility under the Chesapeake Bay Preservation Act to take action where SMZs are not maintained, they are often unaware of problems until it is too late because, under the silviculture provisions of the Water Quality Improvement Act (WQIF), it is DOF that receives notice of harvest activities, inspects sites, and takes action where water quality violations occur.

In response to the subcommittee's request, representatives of DOF and CBLAD met, discussed how to improve communication, and agreed to revise and expand an existing Memorandum of Understanding (MOU) between the agencies. To be included in that MOU is a delineation of the responsibilities of each agency--in particular, DOF's responsibility to provide notification to CBLAD and the applicable local government official where DOF has inspected a site and determined that BMPs have not been maintained as recommended or where DOF has issued a special order or emergency special order for a water quality violation. The subcommittee noted that if the MOU were executed prior to the meeting of the full Commission on December 19, 2000, the subcommittee would not recommend that legislation be introduced to mandate notification by DOF.

c. Water Quality Protection and Restoration

In an effort to restore and protect the water quality sufficient to support the Chesapeake Bay's living resources and vital habitats, *Chesapeake 2000* contains commitments aimed at reducing nutrients and sediments entering the Chesapeake Bay's vital tributaries and reducing or eliminating chemical contaminants (toxic pollution).

Commitments designed to achieve a reduction in nutrients and sediments include the commitment to continue efforts to achieve and maintain the 40 percent nutrient reduction goal agreed to in the 1987 agreement and the commitment to correct the nutrient- and sediment-related problems in the Chesapeake Bay and its tidal tributaries sufficiently by 2010 for them to be removed from the federal list of impaired waters. As mentioned previously, Virginia is close to meeting the 40 percent nutrient reduction goal, due largely to the enactment of water quality,

tributary strategy, and other legislation. Increasing or even maintaining that reduction as the population of the watershed continues to grow will be major challenges, the outcome of which will depend in large part upon the availability of sufficient financial resources.

A substantial portion of the monies that support nutrient and sediment reduction efforts are supplied through grants from the Water Quality Improvement Fund (WQIF). Because the WQIF receives appropriations from surpluses in state revenues, members of the subcommittee inquired as to the effect that declines in such revenues will have on both current and future nutrient and sediment reduction efforts. Dennis Treacy responded that the grants that have been or will be awarded from currently available funds should be sufficient to meet the nutrient reduction commitment, but that future initiatives could be threatened. The subcommittee concluded that water quality protection needs to be recognized as a priority for appropriations from the general fund and recommended that to the extent that appropriations to the WQIF fall below the historical average of $31.5 million, a budget amendment be prepared to appropriate up to that amount. The subcommittee also noted the need for a more in-depth examination of future funding levels and water quality improvement requirements over the coming year.

In an effort to reduce the threat posed by chemical contaminants, *Chesapeake 2000* commits to the reduction or elimination of such contaminants from point sources. Meeting this commitment will involve initiatives to prevent contamination, provide for ongoing monitoring, and implement remedial measures where contamination has occurred. While DEQ monitors for the presence of toxic pollution across the state, the main focus of reduction and remediation efforts has been the Elizabeth River, one of the chief sites of toxic contamination in Virginia. Through partnerships with the federal government and private organizations and through voluntary measures promoted by DEQ's Office of Pollution Prevention, substantial success in preventing toxic pollution has been realized. Additional research is needed, however, on the remediation of existing contamination. DEQ is currently preparing its annual report on toxic pollution, including an outline of strategies for the future. Those strategies are expected to rely chiefly upon cooperative, voluntary measures. The subcommittee noted the need to review that report upon its release in January 2001.

d. Sound Land Use

In an effort to develop, promote, and achieve sound land use practices that minimize the potential adverse impacts of continued growth and development upon the living resources, vital habitat, and water quality of the Chesapeake Bay, *Chesapeake 2000* commits to the promotion of greater conservation of land and open space and to the sustainable development, redevelopment, and revitalization of areas with existing populations and established infrastructure.

Foremost among the commitments aimed at promoting land conservation is the commitment to "permanently preserve from development" 20 percent of the land area in the Chesapeake Bay watershed by 2010. In order to meet this land conservation commitment, each state must determine the amount of land within the Chesapeake Bay watershed that has already been preserved and how much additional land must be preserved. To assist with that determination, the Chesapeake Bay Commission (CBC) and Trust For Public Land (TPL) have been conducting surveys of preserved lands and analyzing the strengths and weaknesses of the

programs and funding mechanisms utilized in each state. The results of that effort, as well as suggestions on how each state's approach to conservation could be improved, will be included in a report scheduled for release in January 2001.

Virginia's approach to conservation has been multifaceted, utilizing federal funds, bond proceeds, appropriations from the general fund, and the promotion of private donations and public-private partnerships. In previous years, Virginia's conservation efforts were centered on the Virginia Outdoors Foundation (VOF), a state agency that promotes the preservation of open-space through the donation of money and interests in land. The efforts of VOF have been supplemented in recent years by (i) the approval in 1992 of a $95 million statewide bond for state parks and natural area protection and (ii) the establishment in 1999 of the Virginia Land Conservation Foundation (VLCF) to manage the Virginia Land Conservation Fund ("Fund"). For the 2000-2002 biennium, the Fund was appropriated $15.8 million to provide grants for the purchase of land and interests in land for conservation purposes.

It is estimated that to meet the commitment, close to one million additional acres across the watershed will need to be preserved. If Virginia is to meet its share of that commitment, existing programs will need to be fully funded and new programs developed or existing programs further enhanced. The subcommittee inquired as to what recommendations the CBC and TPL were expected to make to improve Virginia's approach to conservation. Mr. Baxter responded that while the recommendations have not been finalized, they are likely to include:

- A dedicated source of funding for land conservation;
- Authority for all localities to impose taxes for the purpose of land conservation;
- Full implementation and funding of the Agricultural Vitality Program;
- Enhancement of the efforts of VOF and VLCF, including increased funding and the establishment of a revolving loan "rescue" fund that provides quick access to funds when time is of the essence; and
- Review and modification, if necessary, of the conservation tax credit enacted by the 2000 Session of the General Assembly.

As noted previously, the Commission has long supported the concept of a dedicated source of funding for land conservation, and the subcommittee echoed that support. In addition, the subcommittee expressed concern that declining state revenues might adversely affect funding for VLCF and expressed support for continued full funding for VLCF for fiscal year 2001-2002. Finally, the subcommittee identified the issue of land conservation needs, programs, and funding levels to be an issue in need of further examination.

In effort to promote sustainable development, redevelopment, and revitalization in existing population centers with established infrastructure, *Chesapeake 2000* includes the commitment to strengthen brownfield redevelopment by adding 1,050 sites to productive use by 2010. Brownfields are abandoned, idled, or underutilized industrial and commercial sites where

expansion or redevelopment is complicated by real or perceived environmental contamination. While brownfield sites often have the advantage of having existing buildings, infrastructure, and utility lines and being located near major transportation facilities, that advantage is often outweighed by the potential liability for future contamination and the possibility of enforcement actions by DEQ or by EPA under federal Superfund laws.

DEQ has attempted to address the liability issue through the establishment of the Voluntary Remediation Program (VRP). The VRP provides a mechanism for site owners or operators, with concurrence from DEQ, to voluntarily address contamination at brownfield sites. When remediation has been successfully completed, DEQ issues a certificate of "no further action" that provides assurance that the remediated site will not be subject to further DEQ enforcement action. Issuance of that certificate does not, however, preclude EPA from taking action under Superfund. DEQ is working to obtain a "buy off" on the VRP from EPA so that once DEQ issues a certificate of no further action, an owner or operator can be assured that he will have no further involvement with EPA.

Representatives of the development community indicated that while DEQ is making progress in addressing the liability issue, the complexity and length of the process continues to serve as an impediment to increased brownfield redevelopment. The subcommittee was told that, in the time that it takes to redevelop one brownfield site, a developer can develop three to five new "greenfield" sites. DEQ is aware of these problems and is attempting to address the issue and to develop an efficient regulatory program that satisfies EPA's requirements and concerns.

Also aimed at promoting sustainable development, redevelopment and revitalization is the commitment to work in cooperation with local governments to identify and remove state and local barriers to the use of low impact development designs. When questioned by the subcommittee as to what constitutes a "low impact development design," Mr. Baxter responded that within the planning community, the definition of low impact development generally turns upon the environmental impact of such a development, such as the extent of impervious surface, placement of housing, curb and gutter designs, and how on-site water is managed.

One barrier to the use of low impact development designs identified by the development community is the set of requirements imposed by local development codes and zoning procedures. In response to subcommittee questions, Mr. Michael L. Toalson, Executive Vice President for the Home Builder's Association of Virginia, explained that the incorporation of such designs usually requires that a developer request a zoning change from the locality, and that once a developer makes such a request, he becomes subject to the uncertainties and increased costs of the proffer system. When faced with such a situation, the incentive is for the developer to abandon plans for low impact development and to proceed under existing zoning requirements.

A number of localities have advocated that they be granted authority to impose impact fees upon developers to cover some of the capital costs associated with residential growth. Recognizing the need for localities to recover some of the costs associated with residential development, and the need to promote low impact development, the subcommittee discussed the

possibility of allowing localities to impose impact fees in circumstances tied specifically to the incorporation of low impact development designs. The subcommittee noted, however, that the circumstances under which such fees could be imposed and the reasonableness of those fees were issues that would need to be thoroughly discussed with localities and the development community prior to the development of any legislative proposal.

e. Stewardship and Community Engagement

In an attempt to promote the individual stewardship and community involvement that is critical to the successful promotion of sound land use and the adoption of measures to restore the living resources, vital habitats, and water quality of the Chesapeake Bay, *Chesapeake 2000* commits to increasing education and outreach efforts and to enhancing community engagement throughout the watershed.

Chief among the commitments to increase education and outreach is the commitment to provide a "meaningful Bay or stream outdoor experience" by graduation from high school for every school student in the watershed, beginning with the class of 2005. Fulfilling this commitment will require enhancement of existing programs as well as additional funding. The intent is to build upon established programs such as the Virginia Naturally 2000 environmental education initiative and existing partnerships such as those between the Education Department and museums and nonprofit organizations such as the Chesapeake Bay Foundation. The Education Department is currently working closely with the Bay Program to define what constitutes a "meaningful Bay or outdoor experience" and to discuss what implementation of this commitment might require.

To promote the involvement of communities in efforts to restore and protect the health of the Chesapeake Bay, the agreement contains the commitment to work with localities to identify small watersheds where community-based actions are essential to meeting Chesapeake Bay restoration goals and to work to bring Bay Program resources to those communities and the commitment to enhance funding for locally based programs that will assist in achievement of the agreement's goals. Fulfilling these commitments will require the enhancement of existing funding opportunities, such as the federal grants program for small watersheds. The subcommittee noted the need for the Commission to continue to monitor the progress of education and outreach and community engagement initiatives during 2001.

2. Senate Joint Resolution No. 217

The 2000 Session of the General Assembly passed SJR 217, requesting that the Commission examine the need to expand nonpoint source pollution programs to include BMPs for urban land uses. Responsibility for conducting the study was given to the subcommittee, which began by examining (i) the incentives used to promote agriculture BMPs, (ii) the contribution of urban land uses to nonpoint source pollution, and (iii) the roles of existing programs in controlling nonpoint source pollution.

Donald Wells, Legislative Committee Co-Chair of the Virginia Association of Soil and Water Conservation Districts (the "Association"), discussed the incentives used to encourage

farmers to utilize agriculture BMPs, which are conservation practices that control or treat pollutants in surface run-off to protect water quality. Foremost among those incentives is the agricultural BMP Cost-Share Program, which provides financial assistance to farmers for the installation and maintenance of BMPs and for approved projects that demonstrate the use of innovative BMPs. Other incentives include the Virginia Agriculture BMP Tax Credit Program, which provides a tax credit for the installation of agriculture BMPs, a tax credit for the use of farm conservation equipment that meets state established criteria, technical assistance and training, and a state-adopted Manual of Agriculture Best Management Practices. These incentives have been quite effective in promoting agriculture BMPs and are an integral part of efforts to control nonpoint source pollution emanating from agricultural areas in Virginia.

The subcommittee was also presented with a statement by Gregory C. Evans, Legislative Committee Co-Chair of the Association, concerning the contribution of urban land uses to nonpoint source pollution and the need for incentives to promote the use of urban BMPs. Much of the nonpoint source pollution problem in urban areas can be attributed to contaminated surface run-off, or stormwater. The rapid growth and development experienced by many urban areas has resulted in a significant increase in the amount of impervious surface, which in turn, has resulted in an increase in the volume and velocity of stormwater. Among the pollutants commonly detected in urban stormwater are toxic chemicals, heavy metals, and oil and grease. Urban stormwater also often contains significant quantities of fertilizers and pesticides that have migrated from an ever-increasing number of lawns, gardens, and golf courses, and large loadings of sediment from construction and development activities.

While the contribution of urban land uses to nonpoint source pollution continues to grow, posing major challenges to existing nonpoint source pollution programs, few financial incentives or program procedures have been developed to encourage greater implementation of urban BMPs. Mr. Wells explained that the traditional perception has been that financial incentives were not needed to promote urban BMPs because a builder or developer could recover the cost of the BMPs in the sales price, whereas an individual farmer could not. Such a perception fails to recognize, however, that the need for urban BMPs is not limited solely to areas of new development. Land that has already been developed is very much in need of retrofits and the high cost of such retrofits can serve as a major disincentive for someone considering their installation on a voluntary basis.

In order to take advantage of the potential of urban BMPs to contribute to the reduction of nonpoint source pollution in urban areas and to enhance the effectiveness of existing pollution programs in those areas, the Association advocates the development of incentives to promote greater use of urban BMPs. Specifically, the Association recommends that such incentives include a program to provide tax credits for established urban BMPs and a cost share program to provide financial assistance for innovative urban BMPs. The Association also recommends that such incentives be directed to retrofits and to opportunities that cannot be addressed through existing nonpoint source pollution programs.

Support for incentives to promote urban BMPs was also expressed by Jack Frye, Director of Soil and Water Conservation for DCR, who explained that the impact of land use upon water quality, underground wells and groundwater, stream channel erosion, and localized flooding

increases substantially as one moves from forests to agricultural lands to urbanized areas. While DCR has attempted to provide some financial incentives for the use of urban BMPs, because funding is so limited and the cost of such BMPs so high, only one or two projects can be supported each year. Mr. Frye also cited the role that agriculture BMPs have played in enhancing nonpoint source pollution reduction efforts in agricultural areas and emphasized that urban BMPs have a similar potential to enhance programs to control pollution caused by erosion, sediment and stormwater runoff in urban areas.

Efforts to control pollution caused by erosion and sediment deposition are governed by the Virginia Erosion and Sediment Control Law, (ESCL), which requires localities or local soil and water conservation districts ("districts") to implement and administer erosion and sediment control programs consistent with standards established by the state. Persons planning to conduct a land disturbing activity, which includes any land change that may result in soil erosion from water or wind and the movement of sediments into water or onto land, must submit an erosion and sediment control plan for that activity to be reviewed for compliance with the local program.

Administration and enforcement of the ESCL is a joint effort between DCR, localities, and districts. DCR establishes minimum standards and reviews local programs for compliance with those standards. The role of localities and districts in administering the law varies by jurisdiction: in some jurisdictions the district has no role whatsoever in administering the law, in others, the district reviews local plans and inspects projects, and in still other jurisdictions, localities perform those duties and the district plays an oversight role. These differences have at times resulted in lack of consistency between jurisdictions in program administration, application, and enforcement.

The management of pollution contained in stormwater runoff involves three separate programs governed by different state and federal laws. The state stormwater program is governed by the Stormwater Management Act (SMA), which enables local governments to establish management plans and adopt ordinances that control and treat stormwater runoff to reduce pollution and mitigate the detrimental effect of localized flooding. The establishment of such plans is voluntary; however, once established, the plans and ordinances must meet or exceed state regulatory standards. Localities are encouraged to work together to establish stormwater management programs on a watershed-wide basis. DCR provides localities with training and technical assistance, and conducts periodic reviews of the effectiveness of local programs.

The Virginia Pollution Discharge Elimination System (VPDES) Permit Program, mandated by the federal Clean Water Act, is administered by DEQ and is being implemented in two phases. Under Phase I, a VPDES permit is required for discharges that increase runoff from municipal storm sewer systems (MS4s) serving populations of 100,000 or more and for certain activities, including construction activities, that disturb five or more acres of land. Phase I permits currently cover 11 MS4s, 1,500 facilities and 2,000 construction sites in Virginia. Under Phase II, scheduled to go into effect on March 3, 2003, a VPDES permit will be required for discharges from certain small MS4s and for construction activities disturbing between one and five acres of land. An estimated 5,000-6,000 additional construction sites in Virginia will be covered by Phase II permits.

Requirements for stormwater management for localities located in Tidewater Virginia are governed by the provisions of the Chesapeake Bay Preservation Act and regulations promulgated by CBLAD. The management of stormwater is mandatory in those areas and each locality is responsible for implementing and enforcing its own program, which has been patterned after a model developed by the Chesapeake Bay Local Assistance Board and CBLAD.

Members of the subcommittee expressed concern about having three separate programs administered by three different agencies and questioned whether it would be more efficient to have one agency in charge of all stormwater management activities rather than three. Mr. Frye explained that while having one agency in charge might appear to be more efficient, the mandates of the three agencies and their programs are so different that they would be difficult to meld. He also assured the subcommittee that DCR, DEQ, and CBLAD were working together to improve coordination between the agencies and consistency in stormwater management activities, and that the agencies each reference the others' programs in some manner.

The majority of localities with stormwater management systems in place are located in the eastern half of the state. Although additional localities will be covered under Phase II of the VPDES permit program, a substantial number, particularly in southwestern Virginia and along the I-81 corridor, will have no program or procedures in place to manage stormwater. When members of the subcommittee expressed concern about the number of localities without a stormwater management system, Mr. Frye suggested that the subcommittee might want to consider recommending the establishment of a mandatory state stormwater management program similar to the current voluntary program. He also suggested that consideration be given as to how to generate the financial resources necessary to support such a program. While localities have the authority to establish a utility or service fee to help fund construction and maintenance of stormwater management systems and to provide for the payment by a subdivider or developer of a pro rata share of the cost of sewer, water, and drainage facilities, the funding generated may not be sufficient to support a stormwater management system, particularly in more rural, less densely populated areas.

The subcommittee discussed the need to obtain input on a mandatory stormwater program from interested stakeholders and to explore possible sources of funding for such a program. The subcommittee also noted the need to identify how financial incentives for promoting urban BMPs might be enhanced.

IV. CONCLUSIONS AND RECOMMENDATIONS

During its final meeting prior to the 2001 Session of the General Assembly, the Commission considered the reports of the three subcommittees and their recommendations for action. The Commission endorsed all of the subcommittee recommendations, identified issues in need of further examination over the coming year, and discussed the need for continuation of the Commission's efforts.

After reviewing the efforts of DEQ to revise regulations governing regulated medical waste, transportation of solid waste by barge, and financial assurance requirements for solid waste management facilities, the Commission reports that each of these efforts are moving forward. Proposed revisions to the medical waste regulations will be issued for public comment in the spring of 2001, proposed solid waste barge regulations are expected to become final in early 2001, and proposed changes to financial assurance regulations will be issued for public comment in January 2001. Also progressing is development of the accelerated landfill closure schedule, which DEQ plans to finalize in the spring of 2001. The Commission notes that while there had been a discussion of the state's responsibility for providing financial assistance to localities facing early landfill closures, information provided by DEQ indicates that if localities and landfill owners are in compliance with DEQ's financial assurance regulations they should face no undue financial burden for the accelerated closures. The Commission concluded that while these issues are not ripe for legislative action, they should be monitored as the administrative process moves forward.

The Commission also reports that as part of its examination of strategies to reduce the amount of solid waste being deposited into landfills (SJR 133), it reviewed DEQ's solid waste reduction program and other litter control and recycling efforts. The Commission notes that a number of issues, including the absence of a full-time recycling coordinator to coordinate recycling efforts and to pursue recycling market development opportunities and the lack of a fee or surcharge on solid waste disposed of in Virginia, pose challenges to the state's ability to increase its current rate of recycling. The Commission concludes that while Virginia has met the 25 percent recycling rate mandated in 1989, additional initiatives are needed to enhance the state's ability to divert substantial portions of municipal solid waste from the landfill waste stream. Citing past work conducted for the Commission by the Virginia Recycling Markets Development Council (VRMDC) and their expertise in solid waste management and recycling matters, the Commission recommends:

> ***Recommendation #1:*** *That VRMDC conduct a more detailed analysis of the issues discussed in SJR 133 and report its findings and recommendations to the Commission by June 2001.*

Noting that VRMDC has experienced difficulty in meeting its statutory quorum to conduct business, the Commission further recommends:

> ***Recommendation #2:*** *That legislation be introduced to amend VRMDC's authorizing statute to provide that a simple majority constitutes a quorum to conduct business (Appendix H).*

Following its continued examination of the Virginia State Parks system, the Commission reports that while Virginia's state parks contribute significantly to the state and local economies and are among the most frugally operated state parks in the country, they continue to be woefully underfunded. Particularly acute is the lack of monies for operations, where a $12.2 million gap exists between needs and available funding, and maintenance reserves, where there is a gap of $8 million. The Commission also notes that current funding levels have not been adjusted to reflect increased costs to operate and maintain the state parks resulting from inflation and the expansion of facilities and services. The Commission concludes that funding for state parks needs to be a bigger priority in Virginia and that a reassessment of the needs of state parks is overdue. Therefore, the Commission recommends:

***Recommendation #3**: That budget amendments be prepared to provide for appropriations that address the $20.8 million shortfall in operational and maintenance reserve funding for the State Parks System.*

***Recommendation #4:** That during consideration of the next biennial budget, funding levels for the State Parks System be reassessed and rebenchmarked to provide funding sufficient to cover the future financial needs of Virginia's state parks.*

The Commission also notes that one additional state parks issue that needs to be addressed is the eligibility of state park employees with law enforcement responsibility to participate in the Virginia Law Officers Retirement System (VALORS). While such employees are required to be conservation officers and must satisfactorily complete the Basic Law Enforcement Training Course, they are not eligible to participate in VALORS. Noting the possibility that the General Assembly may reassess and revise the criteria for inclusion in VALORS, the Commission recommends:

***Recommendation #5:** That if the General Assembly does not revise criteria for inclusion in VALORS during the 2001 Session, the VALORS program be expanded to include state park employees with law-enforcement responsibilities, or if the VALORS criteria are modified, the inclusion of those employees be considered as the new criteria are established.*

After reviewing land conservation programs and projects currently underway in Virginia, the Commission reports that both public and private conservation efforts continue to grow. The Commission also reports that the potential exists for the preservation of additional acreage through the recently established, federally funded Conservation Reserve Enhancement Program (CREP), which provides financial incentives to agricultural landowners to restore riparian buffers, grass filter strips and wetlands. Nonetheless, the Commission notes that the continued lack of a dedicated funding source to support land conservation efforts continues to threaten the success of future conservation efforts, particularly during periods of declining state revenues. While the Senate Finance Committee declined to act upon legislation carried over from the 2000 Session to provide for a set-aside from the proceeds of the land recordation tax for allocation to the Virginia Land Conservation Foundation, similar legislation is likely to be introduced during

the 2001 Session. Therefore, the Commission reaffirms its support for a dedicated source of funding for land conservation and recommends:

Recommendation #6: *That if legislation providing for a dedicated funding source for land conservation is introduced during the 2001 Session of the General Assembly, the Commission support such legislation.*

Because legislation creating a dedicated funding source, if enacted, would not provide monies to the Virginia Land Conservation Fund until fiscal year 2003, and additional funding is needed to support farmland preservation activities, the Commission further recommends:

Recommendation #7: *That a budget amendment be prepared to allocate $2 million to the Virginia Land Conservation Fund, with the portion of that amount designated for farmland preservation to be used for the local purchase of development rights through the Virginia Agricultural Vitality Program.*

Following its examination of the commitments contained in *Chesapeake 2000*, the Commission concludes that adequate funding is the main issue to be addressed by the General Assembly. The Commission notes that DEQ's Oyster Heritage Program, which is endeavoring to replenish native oysters through the construction of sanctuary reefs, is progressing but is in need of $500,000 to continue its efforts and that DGIF's Fish Passage Program, which has successfully restored more than 1,300 miles of previously blocked spawning habitat for migratory fish, needs $150,000 to complete a planned project to construct a fishway at the Ashland Mill Dam on the South Anna River.

Also in need of funding for fiscal year 2002 is the Bi-state Blue Crab Advisory Committee (BBCAC), which has requested $200,000 for continued study of the management of the blue crab fishery, and the Virginia Institute of Marine Sciences (VIMS), which is in need of $80,000 to continue its study of SAV restoration. The Commission went on to note that because the Water Quality Improvement Fund (WQIF), which provides funding for water quality improvement projects, is allocated monies from surpluses in state revenues, a projected shortfall in those revenues means that allocations to the WQIF are expected to fall well short of their historical average of $31.5 million. The Commission concludes that such a lack of funding could threaten the progress made in improving water quality in recent years and that funding for water quality improvements needs to be a priority for appropriations from the general fund.

While budget requests have been submitted to the Governor to cover most of the cited needs, the possibility exists that due to budgetary constraints, most, if not all, of the requested funding will not be included in the Governor's budget for fiscal year 2002. Therefore, the Commission recommends:

Recommendation #8: *That to the extent that funds for the Oyster Heritage Program are not included in the Governor's budget, a budget amendment be prepared to appropriate up to $500,000 to DEQ for continued oyster restoration efforts.*

Recommendation #9: *That if funding for the Fish Passage Program is not included in the Governor's budget, a budget amendment be prepared to provide for an appropriation of $150,000 to DGIF for construction of a fishway at the Ashland Mill Dam.*

Recommendation #10: *That to the extent that requested funds are not included in the Governor's budget, a budget amendment be prepared to provide an appropriation of up to $200,000 to the BBCAC for continued examination of issues pertaining to the blue crab fishery.*

Recommendation #11: *That a budget amendment be prepared to appropriate $80,000 to VIMS for continued research on SAV restoration.*

Recommendation #12: *That to the extent that allocations to the WQIF fall below the historical average of $31.5 million, a budget amendment be prepared to appropriate up to that amount.*

After reviewing other issues related to *Chesapeake 2000*, including the need to improve land conservation efforts, identify and promote low impact development designs, and redevelop brownfields, the Commission concludes that these issues warrant further study.

One final *Chesapeake 2000* issue noted by the Commission that needs to be addressed is the lack of a mechanism to track the progress made toward meeting the specific goals and commitments of the agreement. The Commission concludes that because *Chesapeake 2000* is much more comprehensive than previous Chesapeake Bay agreements, the progress made toward implementing its provisions should be specifically tracked through an annual report. Therefore, the Commission recommends:

Recommendation #13: *That legislation be introduced to require the Secretary of Natural Resources to submit an annual report on the progress made toward implementing the specific goals and commitments of the Chesapeake Bay 2000 agreement (Appendix I).*

Finally, the Commission reports that as part of its examination of the need for incentives to promote greater use of BMPs for urban land uses (SJR 217), it reviewed the incentives used to promote agriculture BMPs, the contribution of urban land uses to the nonpoint source pollution problem, and the role of existing erosion and sediment control and stormwater management programs in controlling nonpoint source pollution. The Committee notes that agriculture BMPs have played an important role in the reduction of nonpoint source pollution in agricultural areas, that urban land uses are playing an increasing role in the contribution to nonpoint source pollution, and that the high cost of urban BMPs often discourages their use. The Commission also notes that improvements to existing nonpoint source pollution programs are likely to be needed and concluded that these issues should be examined in further detail during 2001.

In addition to making its recommendations, the Commission concludes that a number of issues require continued oversight or further examination. Specifically, the Commission finds that continued oversight of DEQ's efforts to revise the medical waste and solid waste barge regulations, continue development of the accelerated landfill closure schedule, and promulgate

and implement non-tidal wetlands regulations is needed. The Commission also recommends that a number of issues be studied further, including (i) the funding levels for the WQIF and future water quality improvement requirements; (ii) land conservation needs, programs, and funding requirements; (iii) the identification, promotion, and removal of barriers to low impact development designs and brownfield redevelopment; (iv) the need for incentives to promote urban BMPs and measures improve to current nonpoint source pollution programs; and (v) the development and implementation of TMDLs for impaired waters.

Finally, noting the number of items in need of further examination and discussion, the expectation that additional issues will be raised during the 2001 Session, and the need for the Commission to continue to serve as a body of experts on emerging environmental issues, the Commission recommends:

Recommendation #14: *That a joint resolution be introduced to reauthorize the Commission on the Future of Virginia's Environment for one additional year (Attachment J).*

Respectfully submitted,

Senator William T. Bolling
Senator Emmett W. Hanger, Jr.
Senator W. Henry Maxwell
Delegate David B. Albo*
Delegate M. Kirkland Cox
Delegate R. Creigh Deeds
Delegate Thomas W. Moss, Jr.
Delegate Robert Lee Ware
Mr. David E. Anderson
Mr. John W. Daniel, II
Mr. Mary Bruce Glaize
Mr. Michael Lipford
Mr. Timothy Wade Maupin
Mr. Peter W. Schmidt
Mr. L. Clifford Schroeder, Sr.
Honorable John Paul Woodley, (Ex officio)

* A statement by Delegate Albo concerning the Commission's recommendations follows.

Statement by Delegate Albo

I approve of the report but disagree with Recommendation #7 on page 31 of the Commission's report. When drafting the legislation concerning the Virginia Land Conservation Foundation, we specifically voted to not make a laundry list of monetary dedications for specific purposes. This was against the wishes of farm preservation groups. I see that Recommendation #7 attempts to revisit that issue. Our compromise was to specifically include "farmland" in the list of the types of land for which the VLCF can use its money, thus making farm preservation equal with the other types of properties, such as historical sites. Recommendation #7, if passed, will start a "Christmas Tree" effect with every group trying to get its designated piece.

Respectfully submitted,

Delegate David B. Albo

APPENDICES

APPENDIX A

2000 SESSION

ENROLLED

SENATE JOINT RESOLUTION NO. 76

Continuing the Joint Subcommittee Studying the Future of Virginia's Environment as the Commission on the Future of Virginia's Environment.

Agreed to by the Senate, March 9, 2000
Agreed to by the House of Delegates, March 8, 2000

WHEREAS, the 1996 Session of the General Assembly passed House Joint Resolution No. 221, creating a study to examine the history of environmental and natural resources programs and funding for such programs in the Commonwealth and to develop a long-term vision and plan for the future management of Virginia's natural resources; and

WHEREAS, the 1998 Session of the General Assembly passed House Joint Resolution No. 136 and the 1999 Session of the General Assembly passed House Joint Resolution No. 719 continuing the study on the Future of Virginia's Environment; and

WHEREAS, the joint subcommittee has formed subcommittees on parks and land conservation, solid waste, the Water Quality Improvement Act, and the vision and plan for the future of Virginia's environment, each of which has met frequently and accomplished a great deal; and

WHEREAS, throughout the joint subcommittee's existence, it has been on the forefront of environmental issues coming before the General Assembly, including solid waste issues, the Water Quality Improvement Act, and land conservation issues; and

WHEREAS, due to a continuing desire to monitor the implementation of the joint subcommittee's numerous recommendations and a recognition of the role the joint subcommittee has established for itself as a body of experts on emerging environmental issues, the joint subcommittee members agree that the joint subcommittee should continue for an additional year; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Joint Subcommittee Studying the Future of Virginia's Environment be continued as the Commission Studying the Future of Virginia's Environment. The Commission shall be composed of 16 members, as follows: 3 members of the Senate to be appointed by the Senate Committee on Privileges and Elections; 5 members of the House of Delegates to be appointed by the Speaker of the House, in accordance with the principles of Rule 16 of the Rules of the House of Delegates; and 7 citizen members, three to be appointed by the Senate Committee on Privileges and Elections and four to be appointed by Speaker of the House. The Secretary of Natural Resources, or his designee, shall serve as a nonvoting ex officio member.

In conducting its study, the Commission shall continue to monitor the implementation of its recommendations and create opportunities for the members of the Commission to become educated on environmental issues that may require legislative action.

The direct costs of this study shall not exceed $14,700.

The Division of Legislative Services shall provide staff support for the study. All agencies of the Commonwealth shall provide assistance to the Commission, upon request.

The Commission shall complete its work in time to submit its findings and recommendations to the Governor and the 2001 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

Implementation of this resolution is subject to subsequent approval and certification by the Joint Rules Committee. The Committee may withhold expenditures or delay the period for the conduct of the study.

2000 SESSION

006313432

SENATE JOINT RESOLUTION NO. 133

AMENDMENT IN THE NATURE OF A SUBSTITUTE

(Proposed by the Senate Committee on Rules
on February 14, 2000)

(Patron Prior to Substitute—Senator Hanger)

Directing the Commission on the Future of Virginia's Environment to examine strategies to reduce the amount of solid waste being deposited into landfills in the Commonwealth.

WHEREAS, the amount of waste deposited in Virginia's landfills during the calendar year 1998 reached 12.8 million tons; and

WHEREAS, of the 12.8 million tons of waste disposed of in Virginia in 1998, 82 percent was deposited into landfills; and

WHEREAS, the environmental impact of a solid waste disposal system so heavily based upon the use of landfills is significant and there is considerable evidence that the current level of landfill use is not sustainable without severe adverse consequences; and

WHEREAS, Virginia's rapid growth and the increase of imported waste will only continue to exacerbate the current problem; and

WHEREAS, it is the policy of the General Assembly that, in the Commonwealth of Virginia, 25 percent of the solid waste generated in Virginia be recycled;

WHEREAS, there are a number of waste management strategies such as recycling and waste-to-energy systems that are underemployed in the Commonwealth; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Commission on the Future of Virginia's Environment be directed to examine strategies to reduce the amount of waste being deposited into landfills in the Commonwealth.

In conducting its study, the Commission shall specifically examine ways in which the Commonwealth can encourage the use of alternative waste management practices in order to meet the goal of a 25 percent reduction in the amount of waste deposited in Virginia landfills by the year 2005. The Commission shall make recommendations and provide options for regulatory or legislative actions that will meet the reduction goal.

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

The Commission on the Future of Virginia's Environment shall complete its work in time to submit its findings and recommendations to the Governor and the 2001 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

Official Use By Clerks

Agreed to By The Senate		**Agreed to By The House of Delegates**	
without amendment	☐	without amendment	☐
with amendment	☐	with amendment	☐
substitute	☐	substitute	☐
substitute w/amdt	☐	substitute w/amdt	☐

Date: _____ Date: _____

_____ _____

Clerk of the Senate Clerk of the House of Delegates

2000 SESSION

001179432

SENATE JOINT RESOLUTION NO. 217
AMENDMENT IN THE NATURE OF A SUBSTITUTE
(Proposed by the Senate Committee on Rules
on February 14, 2000)
(Patron Prior to Substitute—Senator Hanger)

Directing the Commission on the Future of Virginia's Environment to study the need to expand the best management practices for the nonpoint source pollution program to include urban land uses.

WHEREAS, the agricultural best management practices (BMP) program is a statewide effort that promotes the installation of agricultural BMPs that control or treat pollutants in surface runoff to prevent contamination of the state's waters; and

WHEREAS, the program is a joint effort of the state Department of Conservation and Recreation and local soil and water conservation districts; and

WHEREAS, in addition to providing technical assistance to landowners, the program also provides cost-share assistance to farmers that implement BMPs in accordance with the Department's "Virginia Agricultural BMP Manual"; and

WHEREAS, tax incentives are also available to farmers who implement BMPs; and

WHEREAS, urban and suburban land uses are also sources of nonpoint source pollution; and

WHEREAS, soil and water conservation districts are increasingly being called upon to provide technical assistance to urban and suburban landowners who wish to control nonpoint source pollution; and

WHEREAS, although technical manuals exist for urban and suburban BMPs, no financial incentive or program procedures have been developed to encourage implementation of these BMPs as are available to agricultural landowners; and

WHEREAS, Senate Joint Resolution 76 (2000) continues the Joint Subcommittee on the Future of Virginia's Environment as the Commission on the Future of Virginia's Environment; and

WHEREAS, the demand for assistance with controlling nonpoint source pollution from urban and suburban land uses is likely to continue to increase; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Commission on the Future of Virginia's Environment be directed to study the need to expand the best management practices for the nonpoint source pollution program to include urban land uses. The Soil and Water Conservation Board shall provide technical assistance, upon request.

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

The Commission on the Future of Virginia's Environment shall complete its work in time to submit its findings and recommendations to the Governor and the 2001 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

001179432 SJ217S1 4/4/00 13:47

Official Use By Clerks

Agreed to By The Senate		**Agreed to By The House of Delegates**	
without amendment	☐	without amendment	☐
with amendment	☐	with amendment	☐
substitute	☐	substitute	☐
substitute w/amdt	☐	substitute w/amdt	☐

Date: _____ Date: _____

_____ _____

Clerk of the Senate Clerk of the House of Delegates

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural Resources

Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 10009, Richmond, Virginia 23240
Fax (804) 698-4500 TDD (804) 698-4021
http://www.deq.state.va.us

Dennis H. Treacy
Director

(804) 698-4000
1-800-592-5482

December 7, 2000

The Honorable William S. Bolling
Senate of Virginia
P.O. Box 112
Mechanicsville, Virginia 23111

Dear Senator Bolling:

I understand that you have requested DEQ's position regarding the state's responsibility for providing financial assistance for the mandated closure of landfills under HB 1228 as passed by the 2000 General Assembly.

As you know, the 1993 General Assembly passed HB1205 to allow old landfills to continue accepting waste after the new federal requirements went into effect in December of 1993. These non-Subtitle D landfills were authorized to continue accepting waste until they reached their vertical design capacity. In order to continue operating, these landfills were required to submit information to DEQ, including the date they anticipated reaching their vertical design capacity. As you can see in the information provided to your subcommittee on November 27, the anticipated closure dates submitted by most of these landfills in 1993 has passed.

HB 1228 directs the closure of the pre-subtitle D landfills still operating in Virginia. It is difficult to determine precisely what would constitute an "early" or "premature" closure for landfills that were first told they would have to close in the late 1980's. The preliminary schedule proposed by DEQ would allow these landfills another 5 to 20 year extension on the use of their landfills, with very few landfills being required to close earlier than the date they indicated in 1999. Localities and other pre-subtitle D landfill owners have been given several extensions on the use of those landfills and should be ready and able to close them.

State and federal regulations require these landfills to provide assurances that they have adequate financial resources to secure closure of the landfill. If local

governments and other landfill owners are in compliance with our financial assurance regulations, they should have adequate resources for closure of those landfills.

When considering whether the State has an obligation to assist with the closure of these non-Subtitle D landfills, it is also important to remember that more than thirty Virginia localities opted to close their landfills prior to 1993 rather than taking advantage of the HB1205 extension and nine localities closed their landfills between 1993 and 2000. None of these localities received financial assistance from the state for the closure of their landfills.

As you know, Governor Gilmore supported SB1309 and HB1257 and the related budget amendment establishing a fund to provide an incentive for closure of these landfills. The legislation was adopted, but the General Assembly did not approve the appropriation. Now that the General Assembly has mandated the establishment of closure dates based upon threats to human health and the environment, it would appear that such incentives are no longer needed.

Very truly yours,

Dennis H. Treacy

Local Governments Demonstrating with a Financial Test in 1999

Local Government	Total Revenues	Demonstration Amount	Percentage	
Accomack	$55,968,105	$7,632,998	13.64%	
Amherst County	$42,373,085	$6,748,697	15.93%	
Appomattox County	$20,593,236	$1,805,364	8.77%	
Augusta County	$96,227,066	$8,374,108	8.70%	
Bath County	$13,960,802	$206,065	1.48%	
Bedford City	$11,159,876	$2,465,651	22.09%	✓
Bedford County	$82,272,000	$5,950,711	7.23%	
Bland County	$10,333,317	$357,000	3.45%	
Botetourt County	$47,381,232	$7,455,294	15.73%	
Buchanan County	$53,995,499	$161,476	0.30%	
Campbell County	$72,149,067	$4,806,867	6.66%	
Caroline County	$36,352,695	$4,928,000	13.56%	
City of Bristol	$37,463,907	$10,201,900	27.23%	✓
City of Covington	$16,200,974	$5,620,000	34.69%	✓
City of Danville	$61,381,409	$3,570	0.01%	
City of Franklin	$18,728,012	$10,963	0.06%	
City of Fredericksburg	$40,208,258	$1,081,321	2.69%	
City of Galax	$39,572,573	$3,520,551	8.90%	
City of Harrisonburg	$70,464,891	$4,727,074	6.71%	
City of Hopewell	$56,106,761	$1,097,733	1.96%	
City of Lynchburg	$159,767,768	$8,484,000	5.31%	
City of Martinsville	$34,859,789	$4,075,389	11.69%	
City of Petersburg [1]	$57,154,465	$4,804,530	8.41%	
City of Portsmouth	$193,452,598	$5,828,560	3.01%	
City of South Boston	$6,672,744	$1,857,665	27.84%	✓
City of Staunton	$45,269,719	$6,138,803	13.56%	
City of Virginia Beach	$732,067,502	$11,410,360	1.56%	
City of Waynesboro	$38,669,927	$3,403,642	8.80%	
Culpeper County	$55,825,482	$1,058,631	1.90%	
Dickenson County	$33,374,719	$246,546	0.74%	
Dinwiddie County	$45,513,098	$452,260	0.99%	
Fairfax County	$1,856,115,133	$45,460,000	2.45%	
Fauquier County	$107,445,094	$14,616,681	13.60%	
Floyd County	$17,585,430	$671,041	3.82%	
Fluvana County	$20,993,185	$1,170,220	5.57%	

[1] 1998 figures. Did not submit for 1999.

Franklin County	$34,891,627	$1,857,068	5.32%
Giles County	$25,576,386	$264,103	1.03%
Greensville County	$25,657,528	$3,284,623	12.80%
Halifax County	$55,668,340	$1,695,136	3.05%
Hanover County	$152,311,566	$7,323,592	4.81%
Henrico County	$481,031,578	$9,735,912	2.02%
Highland County	$4,972,453	$38,377	0.77%
Isle of Wight	$56,076,929	$60,000	0.11%
James City County	$78,761,492	$124,846	0.16%
King William County	$20,093,897	$191,843	0.95%
Lee County	$41,010,860	$776,804	1.89%
Loudoun County	$327,522,684	$15,402,427	4.70%
Louisa County	$43,190,210	$1,516,252	3.51%
Lunenburg County	$18,469,603	$824,000	4.46%
Madison County	$18,102,088	$865,748	4.78%
Mecklenburg County	$39,485,337	$3,573,562	9.05%
Montgomery County	$87,772,133	$2,691,066	3.07%
Newport News	$347,156,000	$9,870,400	2.84%
Northampton County	$24,785,475	$5,535,285	22.33% ✓
Nottoway County	$43,961,109	$2,716,426	6.18%
Orange County	$38,972,717	$2,039,337	5.23%
Pittsylvania County	$78,266,429	$2,982,330	3.81%
Prince Edward County	$26,691,717	$1,843,717	6.91%
Prince William County	$610,044,000	$20,625,676	3.38%
Pulaski County	$52,034,810	$2,000,000	3.84%
Rappahanock County	$12,519,421	$2,576,611	20.58% ✓
R-Board (Stafford/ Fredricksburg)	$40,208,258	$4,687,240	11.66%
Roanoke Valley Resource Authority	$29,575,014 [2]	$5,661,367	19.14%
Rockbridge County	$32,603,459	$2,335,424	7.16%
Rockingham County[3]	$112,639,397	$16,886,800	14.99%
Scott County	$32,749,076	$1,168,485	3.57%
Shenandoah County	$60,323,748	$5,523,264	9.16%
Smyth County	$48,412,359	$618,038	1.28%
Spotsylvania County	$98,983,797	$3,040,000	3.07%
Suffolk City	$79,774,344	$500,317	0.63%

[2] Tangible Net Worth. The financial test for private facilities is used in place of the local government test.
[3] Demonstrated for 87% of the total closure/post-closure costs. The city of Harrisonburg is responsible for 13% of the total closure/post-closure care costs.

Surry County	$19,283,110	$2,093,818	10.86%
Sussex County	$23,696,879	$1,270,150	5.36%
Tazewell County	$63,260,932	$13,095,039	20.70% ✓
Town of South Hill	$4,638,380	$58,900	1.27%
Town of Wytheville	$6,349,401	$103,718	1.63%
Upper Occoquan Sewage Authority	$61,849,401[4]	$3,043,990	4.92%
Westmoreland County	$23,490,133	$242,613	1.03%
Wise County	$70,932,084	$11,602,829	16.36%
Wythe County	$41,689,062	$1,239,300	2.97%
York County	$85,254,036	$473,023	0.55%

[4] Tangible Net Worth. The financial test for private facilities is used in place of the local government test.

Financial Assurance Status of Active Sanitary Landfills Operating with Non-Subtitle D Liners (House Bill 1205 Landfills)

12/14/00

Facility Name	Permit	Closure Dates				Closure Cost	Funds Set Aside (per VACO)*	Difference	Mechanism
		Preliminary HB1288	VACO 1999**	Corps 1999	1205 Submission 1993				
Appomattox County Sanitary Landfill	86	2005	2002	N/A	Not available	$481,786	None[1]	-$481,786	FT
Augusta County Sanitary Landfill	21	2005	2002	N/A	1996	$3,172,898	$3,776,171	+$603,273	FT
Caroline County Landfill	182	2005	1999	N/A	Not available	$1,778,000	$1,500,000	-$278,000	FT
Fauquier County--Corral Farm Landfill	149	2005	2002	2002-2003	1994	$637,016	$1,200,000	+$562,984	FT
Hanover County Landfill[2]	314	2005	2000	N/A	1995	$4,096,222	$3,410,091	-$686,131	FT
Ivy Sanitary Landfill[3]	125	2005	N/A	N/A	1997	$2,938,088	$5,369,943[4]	+$2,431,855	TA
Lunenburg County Landfill	227	2005	2015	N/A	1998	$427,712	$150,000	-$277,712	FT
Martinsville Landfill	49	2005	N/A	2005	2005	$2,222,309	None	-$2,222,309	FT
Mecklenburg County Landfill	14	2005	2010	N/A	2008	$882,156	$509,102	-$373,054	FT
Orange County Landfill	90	2005	2015	N/A	1998	$628,840	None	-$628,840	FT
Rockbridge County	75	2005	N/A	2008	1997	$1,147,676	$1,000,000	-$147,676	FT
Shenandoah County Sanitary Landfill	469	2005	ASAP	N/A	1995	$434,874	$263,864	-$171,010	FT
South Boston Sanitary Landfill	31	2005	2000	2017	Not available	$1,038,557	$194,105	-$844,452	FT
Stafford County Landfill (R-Board Stafford/ Fredericksburg Landfill)	74	2005	2003	N/A	1998	$1,044,197	None	-$1,044,197	FT
Waynesboro City Landfill	204	2005	2000	2001	2005	$1,646,636	$2,131,000	+$484,364	FT
SUBTOTAL						**$22,576,967**	**$19,504,276**	**-$3,072,691**	

[1] Obtained by DEQ phone survey

[2] Pursuant to a consent order, Hanover County has agreed that the facility shall cease receiving solid waste on 12/31/02 unless that date is extended by the Director for good cause shown by Hanover County.

[3] Pursuant to a consent order, Ivy Sanitary Landfill has agreed to cease all disposal of solid waste in Cell 2 (unlined) on the earlier of the following two dates: if issued by DEQ to the Authority, on the date of issuance of any certificate to operate a new CDD disposal unit, or September 1, 2001. The date identified above may be extended by the Director by up to 90 days for good cause.

[4] Trust fund balance listed is taken from DEQ records.

*All numbers in this category were provided by VACO in the fall of 1999 unless noted otherwise.

** All dates in this category were provided by VACO in the fall of 1999.

Mechanism Types are as follows: FT- Financial Test, LOC- Letter of Credit, TA- Trust Agreement, SB- Surety Bond

APPENDIX E

Financial Assurance Status of Active Sanitary Landfills Operating with Non-Subtitle D Liners (House Bill 1205 Landfills)

12/14/00

Facility Name	Permit	Closure Dates				Closure Cost	Funds Set Aside (per VACO)*	Difference	Mechanism
		Proposed HB1288	VACO 1999**	Corps 1999	1205 Submission 1993				
Fluvanna County Sanitary Landfill	429	2010	2020[5]	N/A	1995	$468,088	$105,319[6]	-$362,769	FT
Franklin County Landfill	72	2010	N/A	2003	2003	$700,000	$1,397,948	+$697,948	FT
Loudoun County Landfill	1	2010	2005[7]	N/A	1996/1997	$2,560,000	$2,200,000	-$360,000	FT
Louisa County Landfill	194	2010	2004	2011	1995	$619,069	$1,501,240	+$882,171	FT
Montgomery Mid-County Landfill	397	2010	2000	N/A	1995	$2,076,631	$2,535,252[8]	+$458,621	TA
Northampton County Landfill	507	2010	N/A	2002	2000	$2,089,935	$50,000	-$2,039,935	FT
SUBTOTAL						**$8,513,723**	**$7,789,759[9]**	**-$723,964**	
Accomack County North Landfill	461	2020	2018	2022	1995	$1,841,717	None	-$1,841,717	FT
Bristol Sanitary Landfill	500	2020	N/A[10]	N/A	1996	$1,382,430	None[11]	-$1,382,430	FT
Scott County Landfill	23	2020	2015	2006	1998	$326,306	None[12]	-$326,306	FT
Wise County Landfill	513	2020	2029	N/A	Not available	$2,526,519	$345,600	-$2,180,919	FT
SUBTOTAL						**$6,076,972**	**$345,600**	**-$5,731,372**	
TOTAL - HB 1205						**$37,167,662**	**$27,639,635**	**-$9,528,027**	

[5] Date obtained through DEQ phone survey.
[6] Obtained through DEQ phone survey.
[7] Date obtained through DEQ phone survey.
[8] Trust fund balance listed is taken from DEQ records.
[9] Obtained through DEQ phone survey.
[10] Closure date not able to be determined by facility. Facility is mining waste from the facility and also using the facility to dispose of material unsuitable for the balefill.
[11] Obtained through DEQ phone survey
[12] Obtained through DEQ phone survey
*All numbers in this category were provided by VACO in the fall of 1999 unless noted otherwise.
** All dates in this category were provided by VACO in the fall of 1999.

Mechanism Types are as follows: FT- Financial Test, LOC- Letter of Credit, TA- Trust Agreement, SB- Surety Bond

Financial Assurance Status of Active Sanitary Landfills Operating with Non-Subtitle D Liners (Combination House Bill 1205/ Subtitle D Landfills)

12/14/00

Facility Name	Permit	Closure Dates				Closure Cost (1205 and Subtitle D area)	Funds set Aside (per VACO)*	Difference	Mechanism
		Preliminary HB1288 (1205 area)	VACO 1999**	Corps 1999	1205 Submission 1993				
Accomack County South Landfill	91	2005	2018	2018	1996	$2,372,244	None	-$2,372,244	FT
Big Bethel Landfill	580	2005	N/A	2001	1994	$7,866,097	$7,866,097[1]	$0	SB
Halifax County Landfill	92	2005	N/A[2]	N/A	1998	$1,257,226	$1,492,000[3]	+$234,774	FT
Nottoway County Sanitary Landfill[4]	304	2005	2030[5]	N/A	1995	$833,670	$1,000,000	+$166,330	FT
Petersburg City Landfill	228	2005	N/A	2007	1995	$3,652,574	None[6]	-$3,652,574	none[7]
Independent Hill-- Prince William Sanitary Landfill	29	2005	2024; 2062	2003, 2008	1997	$9,419,599	$4,376,560	-$5,043,039	FT
City of Covington-- Peters Mountain Landfill	594	2005	2000	2000	1995	$1,600,000	$500,000	-$1,100,000	FT
SUBTOTAL						**$27,001,410**	**$15,234,657**	**-$11,766,753**	

[1] Closure funding assured through surety bond. Surety will pay for closure if facility fails to pay for closure.
[2] Facility has ceased accepting waste.
[3] Obtained through DEQ phone survey.
[4] Nottoway County has submitted their notice to close the area at the facility operating under provisions of HB 1205.
[5] Date obtained though DEQ phone survey and is for entire facility. HB1205 area has ceased accepting waste.
[6] Obtained through DEQ phone survey.
[7] This facility has recently been referred to regional office staff for enforcement.
* All numbers in this category provided by VACO in the fall of 1999 unless noted otherwise.
** All dates in this category provided by VACO in the fall of 1999.

Note- the HB 1205 area may represent varying proportions of the total closure costs of combination facilities.
Mechanism Types are as follows: FT- Financial Test, LOC- Letter of Credit, TA- Trust Agreement, SB- Surety Bond

Financial Assurance Status of Active Sanitary Landfills Operating with Non-Subtitle D Liners (Combination House Bill 1205/ Subtitle D Landfills)

12/14/00

Facility Name	Permit	Closure Dates				Closure Cost (1205 and Subtitle D area)	Funds set Aside (per VACO)*	Difference	Mechanism
		Preliminary HB1288 (1205 area)	VACO 1999**	Corps 1999	1205 Submission 1993				
Greensville County Sanitary Landfill	405	2010	N/A	2017	1996	$1,762,424	$283,194	-$1,479,230	FT
Rockingham Sanitary Landfill	62	2010	2000	2001	1996	$14,895,484	$2,000,000	-$12,895,484	FT
Shoosmith Sanitary Landfill	587	2010	N/A	2016-2022	1993	$1,894,997	$2,133,664[8]	+$238,667	TA
Springfield Road Landfill	545	2010	2010[9]	N/A	1993	$2,790,708	$2,300,000[10]	-$490,708	FT
SPSA Regional Landfill	417	2010	2018	2000	1997	$5,009,949	$3,200,000	-$1,809,949	LOC
Virginia Beach Landfill #2 (Mount Trashmore)	398	2010	2015[11]	N/A	1998	$5,727,280	None[12]	-$5,727,280	FT
SUBTOTAL						**$32,080,842**	**$9,916,858**	**-$22,163,984**	
R-Board (Stafford/ Fredericksburg) Landfill	589	2020	2006	N/A	1998	$419,633	$275,000	-$144,633	FT
Botetourt County Landfill	582	2020	2010[13]	N/A	1996	$4,202,601	None	-$4,202,601	FT
SUBTOTAL						**$4,622,234**	**$275,000**	**-$4,347,234**	
TOTAL - COMBO						**$63,704,486**	**$25,426,515**	**-$38,277,971**	

[8] Trust fund balance listed is taken from DEQ records.
[9] Date obtained by DEQ phone survey and is for entire facility.
[10] Obtained through DEQ phone survey.
[11] Date obtained from 1999 CAFR
[12] Obtained through DEQ phone survey.
[13] Date obtained by DEQ phone survey.
* All numbers in this category provided by VACO in the fall of 1999 unless noted otherwise.
** All dates in this category provided by VACO in the fall of 1999.

Note- the HB 1205 area may represent varying proportions of the total closure costs of combination facilities.
Mechanism Types are as follows: FT- Financial Test, LOC- Letter of Credit, TA- Trust Agreement, SB- Surety Bond

APPENDIX F

SENATE OF VIRGINIA

BILL BOLLING
4TH SENATORIAL DISTRICT
COUNTIES OF HANOVER, CAROLINE,
ESSEX, KING AND QUEEN,
KING WILLIAM, MATHEWS,
MIDDLESEX, NEW KENT, AND RICHMOND;
PART OF GLOUCESTER COUNTY
POST OFFICE BOX 112
MECHANICSVILLE, VIRGINIA 23111

COMMITTEE ASSIGNMENTS:
AGRICULTURE, CONSERVATION, AND
NATURAL RESOURCES
GENERAL LAWS
PRIVILEGES AND ELECTIONS
REHABILITATION AND SOCIAL SERVICES

December 18, 2000

Mr. John Carlock
Hampton Roads PDC
723 Woodlake Drive
Chesapeake, VA 23320

Dear Mr. Carlock:

At the November 27, 2000 meeting of the Solid Waste Subcommittee of the Commission on the Future of Virginia's Environment, Mr. Michael Benedetto, a member of the Virginia Markets Development Council, briefed the subcommittee on the activities of the Council. He also described issues facing the Commonwealth as it tries to divert solid waste from landfills and increase the rate by which Virginians recycle waste materials.

The subcommittee was very interested in Mr. Benedetto's comments and particularly the Council's recommendation on solid waste reduction. At its December 29, 2000 meeting, the full Commission approved a request that the Virginia Recycling Markets Development Council examine the following issues during 2001:

1. The current recycling rate of 25% is specified in the Regulations for Solid Waste Planning, 9VAC20-130-10, et.seq. The Commission is particularly interested in how Virginia compares to other states, especially neighboring states, alternative rates that could be considered and the impacts, including costs associated with those alternative rates. The Commission also requests that the Council recommend steps that should be taken to increase recycling if an increase in the rate is adopted.

2. The feasibility and appropriateness of establishing a fee or surcharge on solid waste disposed of in Virginia. Recognizing that a fee on solid waste disposed of in the Commonwealth was approved by the General Assembly but removed from the legislation by the Governor's amendment in 1999, the Commission is interested in the feasibility of such a fee, its impacts on waste disposal and potential uses for the revenue that would be generated through the fee.

3. The justification for DEQ to hire a full-time recycling coordinator.

The Commission requests that the Virginia Recycling Markets Development Council explore these issues during 2001 and submit its findings to the Commission by June 30, 2001.

Sincerely,

William T. Bolling, Chairman
Commission on the Future of
Virginia's Environment

CHESAPEAKE 2000

PREAMBLE

The Chesapeake Bay is North America's largest and most biologically diverse estuary, home to more than 3,600 species of plants, fish and animals. For more than 300 years, the Bay and its tributaries have sustained the region's economy and defined its traditions and culture. It is a resource of extraordinary productivity, worthy of the highest levels of protection and restoration.

Accordingly, in 1983 and 1987, the states of Virginia, Maryland, Pennsylvania, the District of Columbia, the Chesapeake Bay Commission and the U.S. Environmental Protection Agency, representing the federal government, signed historic agreements that established the Chesapeake Bay Program partnership to protect and restore the Chesapeake Bay's ecosystem.

For almost two decades, we, the signatories to these agreements, have worked together as stewards to ensure the public's right to clean water and a healthy and productive resource. We have sought to protect the health of the public that uses the Bay and consumes its bounty. The initiatives we have pursued have been deliberate and have produced significant results in the health and productivity of the Bay's main stem, the tributaries, and the natural land and water ecosystems that compose the Chesapeake Bay watershed.

While the individual and collective accomplishments of our efforts have been significant, even greater effort will be required to address the enormous challenges that lie ahead. Increased population and development within the watershed have created ever-greater challenges for us in the Bay's restoration. These challenges are further complicated by the dynamic nature of the Bay and the ever-changing global ecosystem with which it interacts.

In order to achieve our existing goals and meet the challenges that lie ahead, we must reaffirm our partnership and recommit to fulfilling the public responsibility we undertook almost two decades ago. We must manage for the future. We must have a vision for our desired destiny and put programs into place that will secure it.

To do this, there can be no greater goal in this recommitment than to engage everyone — individuals, businesses, schools and universities, communities and governments — in our effort. We must encourage all citizens of the Chesapeake Bay watershed to work toward a shared vision — a system with abundant, diverse populations of living resources, fed by healthy streams and rivers, sustaining strong local and regional economies, and our unique quality of life.

In affirming our recommitment through this new *Chesapeake 2000*, we recognize the importance of viewing this document in its entirety with no single part taken in isolation of the others. This Agreement reflects the Bay's complexity in that each action we take, like the elements of the Bay itself, is connected to all the others. This Agreement responds to the problems facing this magnificent ecosystem in a comprehensive, multifaceted way.

BY THIS AGREEMENT, we commit ourselves to nurture and sustain a Chesapeake Bay Watershed Partnership and to achieve the goals set forth in the subsequent sections. Without such a partnership, future challenges will not be met. With it, the restoration and protection of the Chesapeake Bay will be ensured for generations to come.

We commit to:

LIVING RESOURCE PROTECTION AND RESTORATION

The health and vitality of the Chesapeake Bay's living resources provide the ultimate indicator of our success in the restoration and protection effort. The Bay's fisheries and the other living resources that sustain them and provide habitat for them are central to the initiatives we undertake in this Agreement.

We recognize the interconnectedness of the Bay's living resources and the importance of protecting the entire natural system. Therefore, we commit to identify the essential elements of habitat and environmental quality necessary to support the living resources of the Bay. In protecting commercially valuable species, we will manage harvest levels with precaution to maintain their health and stability and protect the ecosystem as a whole. We will restore passage for migratory fish and work to ensure that suitable water quality conditions exist in the upstream spawning habitats upon which they depend.

Our actions must be conducted in an integrated and coordinated manner. They must be continually monitored, evaluated and revised to adjust to the dynamic nature and complexities of the Chesapeake Bay and changes in global ecosystems. To advance this ecosystem approach, we will broaden our management perspective from single-system to ecosystem functions and will expand our protection efforts by shifting from single-species to multi-species management. We will also undertake efforts to determine how future conditions and changes in the chemical, physical and biological attributes of the Bay will affect living resources over time.

GOAL

Restore, enhance and protect the finfish, shellfish and other living resources, their habitats and ecological relationships to sustain all fisheries and provide for a balanced ecosystem.

Oysters

- By 2010, achieve, at a minimum, a tenfold increase in native oysters in the Chesapeake Bay, based upon a 1994 baseline. By 2002, develop and implement a strategy to achieve this increase by using sanctuaries sufficient in size and distribution, aquaculture, continued disease research and disease-resistant management strategies, and other management approaches.

Exotic Species

- In 2000, establish a Chesapeake Bay Program Task Force to:
  1. Work cooperatively with the U.S. Coast Guard, the ports, the shipping industry, environmental interests and others at the national level to help establish and implement a national program designed to substantially reduce and, where possible, eliminate the introduction of non-native species carried in ballast water; and
  2. By 2002, develop and implement an interim voluntary ballast water management program for the waters of the Bay and its tributaries.

- By 2001, identify and rank non-native, invasive aquatic and terrestrial species which are causing or have the potential to cause significant negative impacts to the Bay's aquatic ecosystem. By 2003, develop and implement management plans for those species deemed problematic to the restoration and integrity of the Bay's ecosystem.

Fish Passage and Migratory and Resident Fish

- By June 2002, identify the final initiatives necessary to achieve our existing goal of restoring fish passage for migratory fish to more than 1,357 miles of currently blocked river habitat by 2003 and establish a monitoring program to assess outcomes.
- By 2002, set a new goal with implementation schedules for additional migratory and resident fish passages that addresses the removal of physical blockages. In addition, the goal will address the removal of chemical blockages caused by acid mine drainage. Projects should be selected for maximum habitat and stock benefit.
- By 2002, assess trends in populations for priority migratory fish species. Determine tributary-specific target population sizes based upon projected fish passage, and current and projected habitat available, and provide recommendations to achieve those targets.
- By 2003, revise fish management plans to include strategies to achieve target population sizes of tributary-specific migratory fish.

Multi-species Management

- By 2004, assess the effects of different population levels of filter feeders such as menhaden, oysters and clams on Bay water quality and habitat.
- By 2005, develop ecosystem-based multi-species management plans for targeted species.
- By 2007, revise and implement existing fisheries management plans to incorporate ecological, social and economic considerations, multi-species fisheries management and ecosystem approaches.

Crabs

- By 2001, establish harvest targets for the blue crab fishery and begin implementing complementary state fisheries management strategies Baywide. Manage the blue crab fishery to restore a healthy spawning biomass, size and age structure.

VITAL HABITAT PROTECTION AND RESTORATION

The Chesapeake Bay's natural infrastructure is an intricate system of terrestrial and aquatic habitats, linked to the landscapes and the environmental quality of the watershed. It is composed of the thousands of miles of river and stream habitat that interconnect the land, water, living resources and human communities of the Bay watershed. These vital habitats–including open water, underwater grasses, marshes, wetlands, streams and forests–support living resource abundance by providing key food and habitat for a variety of species. Submerged aquatic vegetation reduces shoreline erosion while forests and wetlands protect water quality by naturally processing the pollutants before they enter the water. Long-term protection of this natural infrastructure is essential.

In managing the Bay ecosystem as a whole, we recognize the need to focus on the individuality of each river, stream and creek, and to secure their protection in concert with the communities and individuals that reside within these small watersheds. We also recognize that we must continue to refine and share information regarding the importance of these vital habitats to the Bay's fish, shellfish and waterfowl. Our efforts to preserve the integrity of this natural infrastructure will protect the Bay's waters and living resources and will ensure the viability of human economies and communities that are dependent upon those resources for sustenance, reverence and posterity.

GOAL

Preserve, protect and restore those habitats and natural areas that are vital to the survival and diversity of the living resources of the Bay and its rivers.

Submerged Aquatic Vegetation

- Recommit to the existing goal of protecting and restoring 114,000 acres of submerged aquatic vegetation (SAV).
- By 2002, revise SAV restoration goals and strategies to reflect historic abundance, measured as acreage and density from the 1930s to the present. The revised goals will include specific levels of water clarity which are to be met in 2010. Strategies to achieve these goals will address water clarity, water quality and bottom disturbance.
- By 2002, implement a strategy to accelerate protection and restoration of SAV beds in areas of critical importance to the Bay's living resources.

Watersheds

- By 2010, work with local governments, community groups and watershed organizations to develop and implement locally supported watershed management plans in two-thirds of the Bay watershed covered by this Agreement. These plans would address the protection, conservation and restoration of stream corridors, riparian forest buffers and wetlands for the purposes of improving habitat and water quality, with collateral benefits for optimizing stream flow and water supply.
- By 2001, each jurisdiction will develop guidelines to ensure the aquatic health of stream corridors. Guidelines should consider optimal surface and groundwater flows.
- By 2002, each jurisdiction will work with local governments and communities that have watershed management plans to select pilot projects that promote stream corridor protection and restoration.
- By 2003, include in the "State of the Bay Report," and make available to the public, local governments and others, information concerning the aquatic health of stream corridors based on adopted regional guidelines.
- By 2004, each jurisdiction, working with local governments, community groups and watershed organizations, will develop stream corridor restoration goals based on local watershed management planning.

Wetlands

- Achieve a no-net loss of existing wetlands acreage and function in the signatories' regulatory programs.
- By 2010, achieve a net resource gain by restoring 25,000 acres of tidal and non-tidal wetlands. To do this, we commit to achieve and maintain an average restoration rate of 2,500 acres per year basin wide by 2005 and beyond. We will evaluate our success in 2005.
- Provide information and assistance to local governments and community groups for the development and implementation of wetlands preservation plans as a component of a locally based integrated watershed management plan. Establish a goal of implementing the wetlands plan component in 25 percent of the land area of each state's Bay watershed by 2010. The plans would preserve key wetlands while addressing surrounding land use so as to preserve wetland functions.
- Evaluate the potential impact of climate change on the Chesapeake Bay watershed, particularly with respect to its wetlands, and consider potential management options.

Forests

- By 2002, ensure that measures are in place to meet our riparian forest buffer restoration goal of 2,010 miles by 2010. By 2003, establish a new goal to expand buffer mileage.
- Conserve existing forests along all streams and shorelines.
- Promote the expansion and connection of contiguous forests through conservation easements, greenways, purchase and other land conservation mechanisms.

WATER QUALITY PROTECTION AND RESTORATION

Improving water quality is the most critical element in the overall protection and restoration of the Chesapeake Bay and its tributaries. In 1987, we committed to achieving a 40 percent reduction in controllable nutrient loads to the Bay. In 1992, we committed to tributary-specific reduction strategies to achieve this reduction and agreed to stay at or below these nutrient loads once attained. We have made measurable reductions in pollution loading despite continuing growth and development. Still, we must do more.

Recent actions taken under the Clean Water Act resulted in listing portions of the Chesapeake Bay and its tidal rivers as "impaired waters." These actions have emphasized the regulatory framework of the Act along with the ongoing cooperative efforts of the Chesapeake Bay Program as the means to address the nutrient enrichment problems within the Bay and its rivers. In response, we have developed, and are implementing, a process for integrating the cooperative and statutory programs of the Chesapeake Bay and its tributaries. We have agreed to the goal of improving water quality in the Bay and its tributaries so that these waters may be removed from the impaired waters list prior to the time when regulatory mechanisms under Section 303(d) of the Clean Water Act would be applied.

We commit to achieve and maintain water quality conditions necessary to support living resources throughout the Chesapeake Bay ecosystem. Where we have failed to achieve established water quality goals, we will take actions necessary to reach and maintain those goals. We will make pollution prevention a central theme in the protection of water quality. And we will take actions that protect freshwater flow regimes for riverine and estuarine habitats. In pursuing the restoration of vital habitats throughout

the watershed, we will continue efforts to improve water clarity in order to meet light requirements necessary to support SAV. We will expand our efforts to reduce sediments and airborne pollution, and ensure that the Bay is free from toxic effects on living resources and human health. We will continue our cooperative intergovernmental approach to achieve and maintain water quality goals through cost-effective and equitable means within the framework of federal and state law. We will evaluate the potential impacts of emerging issues, including, among others, airborne ammonia and nonpoint sources of chemical contaminants. Finally, we will continue to monitor water quality conditions and adjust our strategies accordingly.

GOAL

Achieve and maintain the water quality necessary to support the aquatic living resources of the Bay and its tributaries and to protect human health.

Nutrients and Sediments

- Continue efforts to achieve and maintain the 40 percent nutrient reduction goal agreed to in 1987, as well as the goals being adopted for the tributaries south of the Potomac River.
- By 2010, correct the nutrient- and sediment-related problems in the Chesapeake Bay and its tidal tributaries sufficiently to remove the Bay and the tidal portions of its tributaries from the list of impaired waters under the Clean Water Act. In order to achieve this:

    1. By 2001, define the water quality conditions necessary to protect aquatic living resources and then assign load reductions for nitrogen and phosphorus to each major tributary;

    2. Using a process parallel to that established for nutrients, determine the sediment load reductions necessary to achieve the water quality conditions that protect aquatic living resources, and assign load reductions for sediment to each major tributary by 2001;

    3. By 2002, complete a public process to develop and begin implementation of revised Tributary Strategies to achieve and maintain the assigned loading goals;

    4. By 2003, the jurisdictions with tidal waters will use their best efforts to adopt new or revised water quality standards consistent with the defined water quality conditions. Once adopted by the jurisdictions, the Environmental Protection Agency will work expeditiously to review the new or revised standards, which will then be used as the basis for removing the Bay and its tidal rivers from the list of impaired waters; and

    5. By 2003, work with the Susquehanna River Basin Commission and others to adopt and begin implementing strategies that prevent the loss of the sediment retention capabilities of the lower Susquehanna River dams.

Chemical Contaminants

- We commit to fulfilling the 1994 goal of a Chesapeake Bay free of toxics by reducing or eliminating the input of chemical contaminants from all controllable sources to levels that result in no toxic or bioaccumulative impact on the living resources that inhabit the Bay or on human health.
- By Fall of 2000, reevaluate and revise, as necessary, the "Chesapeake Bay Basinwide Toxics Reduction and Prevention Strategy" focusing on:

    1. Complementing state and federal regulatory programs to go beyond traditional point source controls, including nonpoint sources such as groundwater discharge and atmospheric deposition, by using a watershed-based approach; and

    2. Understanding the effects and impacts of chemical contaminants to increase the effectiveness of management actions.

- Through continual improvement of pollution prevention measures and other voluntary means, strive for zero release of chemical contaminants from point sources, including air sources. Particular emphasis shall be placed on achieving, by 2010, elimination of mixing zones for persistent or bioaccumulative toxics.
- Reduce the potential risk of pesticides to the Bay by targeting education, outreach and implementation of Integrated Pest Management and specific Best Management Practices on those lands that have higher potential for contributing pesticide loads to the Bay.

Priority Urban Waters

- Support the restoration of the Anacostia River, Baltimore Harbor, and Elizabeth River and their watersheds as models for urban river restoration in the Bay basin.
- By 2010, the District of Columbia, working with its watershed partners, will reduce pollution loads to the Anacostia River in order to eliminate public health concerns and achieve the living resource, water quality and habitat goals of this and past Agreements.

Air Pollution

- By 2003, assess the effects of airborne nitrogen compounds and chemical contaminants on the Bay ecosystem and help establish reduction goals for these contaminants.

Boat Discharge

- By 2003, establish appropriate areas within the Chesapeake Bay and its tributaries as "no discharge zones" for human waste from boats. By 2010, expand by 50 percent the number and availability of waste pump-out facilities.
- By 2006, reassess our progress in reducing the impact of boat waste on the Bay and its tributaries. This assessment will include evaluating the benefits of further expanding no discharge zones, as well as increasing the number of pump-out facilities.

SOUND LAND USE

In 1987, the signatories agreed that "there is a clear correlation between population growth and associated development and environmental degradation in the Chesapeake Bay system." This Agreement reaffirms that concept and recognizes that more must be done.

An additional three million people are expected to settle in the watershed by 2020. This growth could potentially eclipse the nutrient reduction and habitat protection gains of the past. Therefore it is critical that we consider our approaches to land use in order to ensure progress in protecting the Bay and its local watersheds.

Enhancing, or even maintaining, the quality of the Bay while accommodating growth will frequently involve difficult choices. It will require a renewed commitment to appropriate development standards. The signatories will assert the full measure of their authority to limit and mitigate the potential adverse effects of continued growth; each however, will pursue this objective within the framework of its own historic, existing or future land use practices or processes. Local jurisdictions have been delegated authority over many decisions regarding growth and development which have both direct and indirect effects on the Chesapeake Bay system and its living resources. The role of local governments in the Bay's restoration and protection effort will be given proper recognition and support through state and federal resources. States will also engage in active partnerships with local governments in managing growth and development in ways that support the following goal.

We acknowledge that future development will be sustainable only if we protect our natural and rural resource land, limit impervious surfaces and concentrate new growth in existing population centers or suitable areas served by appropriate infrastructure. We will work to integrate environmental, community and economic goals by promoting more environmentally sensitive forms of development. We will also strive to coordinate land-use, transportation, water and sewer and other infrastructure planning so that funding and policies at all levels of government do not contribute to poorly planned growth and development or degrade local water quality and habitat. We will advance these policies by creating partnerships with local governments to protect our communities and to discharge our duties as trustees in the stewardship of the Chesapeake Bay. Finally, we will report every two years on our progress in achieving our commitments to promote sound land use.

GOAL

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.

Land Conservation

- By 2001, complete an assessment of the Bay's resource lands including forests and farms, emphasizing their role in the protection of water quality and critical habitats, as well as cultural and economic viability.
- Provide financial assistance or new revenue sources to expand the use of voluntary and market-based mechanisms such as easements, purchase or transfer of development rights and other approaches to protect and preserve natural resource lands.
- Strengthen programs for land acquisition and preservation within each state that are supported by funding and target the most valued lands for protection. Permanently preserve from development 20 percent of the land area in the watershed by 2010.

- Provide technical and financial assistance to local governments to plan for or revise plans, ordinances and subdivision regulations to provide for the conservation and sustainable use of the forest and agricultural lands.
- In cooperation with local governments, develop and maintain in each jurisdiction a strong GIS system to track the preservation of resource lands and support the implementation of sound land use practices.

Development, Redevelopment and Revitalization

- By 2012, reduce the rate of harmful sprawl development of forest and agricultural land in the Chesapeake Bay watershed by 30 percent measured as an average over five years from the baseline of 1992-1997, with measures and progress reported regularly to the Chesapeake Executive Council.
- By 2005, in cooperation with local government, identify and remove state and local impediments to low impact development designs to encourage the use of such approaches and minimize water quality impacts.
- Work with communities and local governments to encourage sound land use planning and practices that address the impacts of growth, development and transportation on the watershed.
- By 2002, review tax policies to identify elements which discourage sustainable development practices or encourage undesirable growth patterns. Promote the modification of such policies and the creation of tax incentives which promote the conservation of resource lands and encourage investments consistent with sound growth management principles.
- The jurisdictions will promote redevelopment and remove barriers to investment in underutilized urban, suburban and rural communities by working with localities and development interests.
- By 2002, develop analytical tools that will allow local governments and communities to conduct watershed-based assessment of the impacts of growth, development and transportation decisions.
- By 2002, compile information and guidelines to assist local governments and communities to promote ecologically-based designs in order to limit impervious cover in undeveloped and moderately developed watersheds and reduce the impact of impervious cover in highly developed watersheds.
- Provide information to the development community and others so they may champion the application of sound land use practices.
- By 2003, work with local governments and communities to develop land-use management and water resource protection approaches that encourage the concentration of new residential development in areas supported by adequate water resources and infrastructure to minimize impacts on water quality.
- By 2004, the jurisdictions will evaluate local implementation of stormwater, erosion control and other locally-implemented water quality protection programs that affect the Bay system and ensure that these programs are being coordinated and applied effectively in order to minimize the impacts of development.
- Working with local governments and others, develop and promote wastewater treatment options, such as nutrient reducing septic systems, which protect public health and minimize impacts to the Bay's resources.
- Strengthen brownfield redevelopment. By 2010, rehabilitate and restore 1,050 brownfield sites to productive use.
- Working with local governments, encourage the development and implementation of emerging urban storm water retrofit practices to improve their water quantity and quality function.

Transportation

- By 2002, the signatory jurisdictions will promote coordination of transportation and land use planning to encourage compact, mixed use development patterns, revitalization in existing communities and transportation strategies that minimize adverse effects on the Bay and its tributaries.
- By 2002, each state will coordinate its transportation policies and programs to reduce the dependence on automobiles by incorporating travel alternatives such as telework, pedestrian, bicycle and transit options, as appropriate, in the design of projects so as to increase the availability of alternative modes of travel as measured by increased use of those alternatives.
- Consider the provisions of the federal transportation statutes for opportunities to purchase easements to preserve resource lands adjacent to rights of way and special efforts for stormwater management on both new and rehabilitation projects.
- Establish policies and incentives which encourage the use of clean vehicle and other transportation technologies that reduce emissions.

Public Access

- By 2010, expand by 30 percent the system of public access points to the Bay, its tributaries and related resource sites in an environmentally sensitive manner by working with state and federal agencies, local governments and stakeholder organizations.
- By 2005, increase the number of designated water trails in the Chesapeake Bay region by 500 miles.
- Enhance interpretation materials that promote stewardship at natural, recreational, historical and cultural public access points within the Chesapeake Bay watershed.
- By 2003, develop partnerships with at least 30 sites to enhance place-based interpretation of Bay-related resources and themes and stimulate volunteer involvement in resource restoration and conservation.

STEWARDSHIP AND COMMUNITY ENGAGEMENT

The Chesapeake Bay is dependent upon the actions of every citizen in the watershed, both today and in the future. We recognize that the cumulative benefit derived from community-based watershed programs is essential for continued progress toward a healthier Chesapeake Bay. Therefore, we commit ourselves to engage our citizens by promoting a broad conservation ethic throughout the fabric of community life, and foster within all citizens a deeper understanding of their roles as trustees of their own local environments. Through their actions, each individual can contribute to the health and well-being of their neighborhood streams, rivers and the land that surrounds them, not only as ecological stewards of the Bay but also as members of watershed-wide communities. By focusing individuals on local resources, we will advance Baywide restoration as well.

We recognize that the future of the Bay also depends on the actions of generations to follow. Therefore, we commit to provide opportunities for cooperative learning and action so that communities can promote local environmental quality for the benefit and enjoyment of residents and visitors. We will assist communities throughout the watershed in improving quality of life, thereby strengthening local

economies and connecting individuals to the Bay through their shared sense of responsibility. We will seek to increase the financial and human resources available to localities to meet the challenges of restoring the Chesapeake Bay.

GOAL

Promote individual stewardship and assist individuals, community-based organizations, businesses, local governments and schools to undertake initiatives to achieve the goals and commitments of this agreement.

Education and Outreach

- Make education and outreach a priority in order to achieve public awareness and personal involvement on behalf of the Bay and local watersheds.
- Provide information to enhance the ability of citizen and community groups to participate in Bay restoration activities on their property and in their local watershed.
- Expand the use of new communications technologies to provide a comprehensive and interactive source of information on the Chesapeake Bay and its watershed for use by public and technical audiences. By 2001, develop and maintain a web-based clearing house of this information specifically for use by educators.
- Beginning with the class of 2005, provide a meaningful Bay or stream outdoor experience for every school student in the watershed before graduation from high school.
- Continue to forge partnerships with the Departments of Education and institutions of higher learning in each jurisdiction to integrate information about the Chesapeake Bay and its watershed into school curricula and university programs.
- Provide students and teachers alike with opportunities to directly participate in local restoration and protection projects, and to support stewardship efforts in schools and on school property.
- By 2002, expand citizen outreach efforts to more specifically include minority populations by, for example, highlighting cultural and historical ties to the Bay, and providing multi-cultural and multilingual educational materials on stewardship activities and Bay information.

Community Engagement

- Jurisdictions will work with local governments to identify small watersheds where community-based actions are essential to meeting Bay restoration goals—in particular wetlands, forested buffers, stream corridors and public access and work with local governments and community organizations to bring an appropriate range of Bay program resources to these communities.
- Enhance funding for locally-based programs that pursue restoration and protection projects that will assist in the achievement of the goals of this and past agreements.
- By 2001, develop and maintain a clearing house for information on local watershed restoration efforts, including financial and technical assistance.
- By 2002, each signatory jurisdiction will offer easily-accessible information suitable for analyzing environmental conditions at a small watershed scale.

- Strengthen the Chesapeake Bay Program's ability to incorporate local governments into the policy decision making process. By 2001, complete a reevaluation of the Local Government Participation Action Plan and make necessary changes in Bay program and jurisdictional functions based upon the reevaluation.
- Improve methods of communication with and among local governments on Bay issues and provide adequate opportunities for discussion of key issues.
- By 2001, identify community watershed organizations and partnerships. Assist in establishing new organizations and partnerships where interest exists. These partners will be important to successful watershed management efforts in distributing information to the public, and engaging the public in the Bay restoration and preservation effort.
- By 2005, identify specific actions to address the challenges of communities where historically poor water quality and environmental conditions have contributed to disproportional health, economic or social impacts.

Government by Example

- By 2002, each signatory will put in place processes to:
    1. Ensure that all properties owned, managed or leased by the signatories are developed, redeveloped and used in a manner consistent with all relevant goals, commitments and guidance of this Agreement.
    2. Ensure that the design and construction of signatory-funded development and redevelopment projects are consistent with all relevant goals, commitments and guidance of this Agreement.
- Expand the use of clean vehicle technologies and fuels on the basis of emission reductions, so that a significantly greater percentage of each signatory government's fleet of vehicles use some form of clean technology.
- By 2001, develop an Executive Council Directive to address stormwater management to control nutrient, sediment and chemical contaminant runoff from state, federal and District owned land.

Partnerships

- Strengthen partnerships with Delaware, New York and West Virginia by promoting communication and by seeking agreements on issues of mutual concern.
- Work with non-signatory Bay states to establish links with community-based organizations throughout the Bay watershed.

BY THIS AGREEMENT, we rededicate ourselves to the restoration and protection of the ecological integrity, productivity and beneficial uses of the Chesapeake Bay system. We reaffirm our commitment to previously-adopted Chesapeake Bay Agreements and their supporting policies. We agree to report annually to the citizens on the state of the Bay and consider any additional actions necessary.

DATE June 28, 2000

FOR THE COMMONWEALTH OF VIRGINIA

FOR THE STATE OF MARYLAND

FOR THE COMMONWEALTH OF PENNSYLVANIA

FOR THE DISTRICT OF COLUMBIA

FOR THE UNITED STATES OF AMERICA

FOR THE CHESAPEAKE BAY COMMISSION

2001 SESSION

013989432

SENATE BILL NO. 1162

Offered January 10, 2001

Prefiled January 10, 2001

A BILL to amend and reenact § 9-145.48 of the Code of Virginia, relating to membership of the Virginia Recycling Markets Development Council.

Patron—Hanger

Referred to Committee on General Laws

Be it enacted by the General Assembly of Virginia:

1. That § 9-145.48 of the Code of Virginia is amended and reenacted as follows:

§ 9-145.48. Membership; meetings; and staffing.

A. The Council shall be composed of nineteen members as follows: the Directors, or a policy-making designee, of the Departments of Business Assistance, Environmental Quality, General Services and Transportation; and fifteen citizen members appointed by the Governor. The citizen members shall be appointed from among residents of the Commonwealth who are knowledgeable about recycling and the development of markets for recyclable materials. Of the fifteen citizen members one member shall be a representative of county governments selected from nominations submitted by the Virginia Association of Counties; one member representing municipal government selected from nominations submitted by the Virginia Municipal League; one member representing urban Planning District Commissions and one member representing rural Planning District Commissions selected from nominations submitted from the Association of Planning Districts; one member from the general public; and one representative each, selected from nominations submitted by recognized industry associations representing solid waste collection and disposal, recycling, glass, paper, aluminum, plastic, tire, oil, scrap metal and organic waste.

B. Citizen members of the Council shall serve four-year terms. *However, for the terms of the fifteen citizen members to be appointed July 1, 2001, eight shall be appointed for four-year terms and seven shall be for two-year terms. Thereafter, all appointments shall be for terms of four years, except that appointments to fill vacancies shall be for the unexpired term.* They shall not receive a per diem, compensation for their service, or travel expenses.

C. The Council shall elect a chairman and vice chairman annually from among its members. The Council shall meet at least quarterly on such dates and at such times as they determine. ~~Ten members of the~~ *A majority of the appointed members of the* Council shall constitute a quorum.

D. Staff support shall be provided by the members of the Council, except that administrative support shall be provided by the Department of Environmental Quality. Such administrative support shall not exceed twenty hours of work per quarter and shall be funded out of the Department's general fund appropriation for operations.

Official Use By Clerks			
Passed By The Senate		**Passed By The House of Delegates**	
with amendment	☐	with amendment	☐
substitute	☐	substitute	☐
substitute w/amdt	☐	substitute w/amdt	☐
Date: _____		Date: _____	
_____		_____	
Clerk of the Senate		Clerk of the House of Delegates	

2001 SESSION

013652404

SENATE BILL NO. 1087
Offered January 10, 2001
Prefiled January 10, 2001

A BILL to amend the Code of Virginia by adding in Chapter 5.1 of Title 2.1 an article numbered 3, consisting of a section numbered 2.1-51.12:4, relating to the Chesapeake Bay 2000 agreement.

Patron—Bolling

Referred to Committee on Agriculture, Conservation and Natural Resources

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding in Chapter 5.1 of Title 2.1 an article numbered 3, consisting of a section numbered 2.1-51.12:4 as follows:

Article 3.
Chesapeake Bay 2000 Agreement

§ 2.1-51.12:4. Chesapeake Bay 2000 agreement; annual report.

By November 1 of each year, the Secretary of Natural Resources, in consultation with appropriate state and federal agencies, shall report to the House Committee on Chesapeake and Its Tributaries, the Senate Committee on Agriculture, Conservation, and Natural Resources, the House Committee on Appropriations, the Senate Committee on Finance, the Virginia delegation to the Chesapeake Bay Commission, and the Virginia Chesapeake Bay Partnership Council on specific progress made in implementing the provisions of the Chesapeake Bay 2000 agreement. The report shall include, but not be limited to, a description of the programs, activities, and initiatives developed and implemented by state and local government agencies to meet each of the goals and commitments contained in the agreement.

Official Use By Clerks

Passed By The Senate		Passed By The House of Delegates	
with amendment	☐	with amendment	☐
substitute	☐	substitute	☐
substitute w/amdt	☐	substitute w/amdt	☐

Date: _____ Date: _____

Clerk of the Senate

Clerk of the House of Delegates

2001 SESSION

013977404

SENATE JOINT RESOLUTION NO. 373

Offered January 10, 2001
Prefiled January 10, 2001

Continuing the Commission Studying the Future of Virginia's Environment.

Patrons—Bolling and Rerras

Referred to Committee on Rules

WHEREAS, the 1996 Session of the General Assembly passed House Joint Resolution 221, creating a study to examine the history of environmental and natural resources programs and funding for such programs in the Commonwealth and to develop a long-term vision and plan for the future management Virginia's natural resources; and

WHEREAS, the 1998 Session of the General Assembly passed House Joint Resolution 136 and the 1999 Session of the General Assembly passed House Joint Resolution 719 continuing the study on the Future of Virginia's Environment; and

WHEREAS, the 2000 Session of the General Assembly passed House Joint Resolution 76 continuing the study on the future of Virginia's environment; and

WHEREAS, two Senate Joint Resolutions, Senate Joint Resolution 133, requesting a study of the strategies to reduce the amount of solid waste being deposited in Virginia's landfills, and Senate Joint Resolution 217, requesting a study of the need to expand the best management practices for the nonpoint program to include urban land uses, were referred to the Commission; and

WHEREAS, the Commission has formed subcommittees on the Chesapeake 2000 Agreement, solid waste, and parks and land conservation to receive testimony not only on the two resolutions but on such timely environmental issues as the tributaries strategies, the total maximum daily load (TMDL) requirements, land use and growth, oyster replenishment, the regulatory programs for medical waste and nontidal wetlands, and the Water Quality Improvement Act.

WHEREAS, the Commission has not completed its work on the two resolutions and on the numerous issues before it this year; and

WHEREAS, due to a continuing desire to monitor the implementation of the Commission's numerous recommendations and a recognition of the role the Commission has established for itself as a body of experts on emerging environmental issues, the Commission members agree that the Commission should continue for an additional year; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Commission Studying the Future of Virginia's Environment be continued. The Commission shall consist of 16 members as follows: three members of the Senate to be appointed by the Senate Committee on Privileges and Elections; five members of the House of Delegates to be appointed by the Speaker of the House in accordance with the principles of proportional representation contained in the Rules of the House of Delegates; and seven citizen members, three to be appointed by the Senate Committee on Privileges and Elections and four to be appointed by Speaker of the House. The Secretary of Natural Resources, or his designee, shall serve as a nonvoting ex officio member.

In conducting its study, the Commission shall continue to monitor the implementation of its recommendations and create opportunities for the members of the Commission to become educated on environmental issues that may require legislative action.

The direct costs of this study shall not exceed $14,700.

The Division of Legislative Services shall provide staff support for the study. All agencies of the Commonwealth shall provide assistance to the Commission,upon request.

The Commission shall complete its work in time to submit its findings and recommendations to the Governor and the 2002 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

Implementation of this resolution is subject to subsequent approval and certification by the Joint Rules Committee. The Committee may withhold expenditures or delay the period for the conduct of the study.