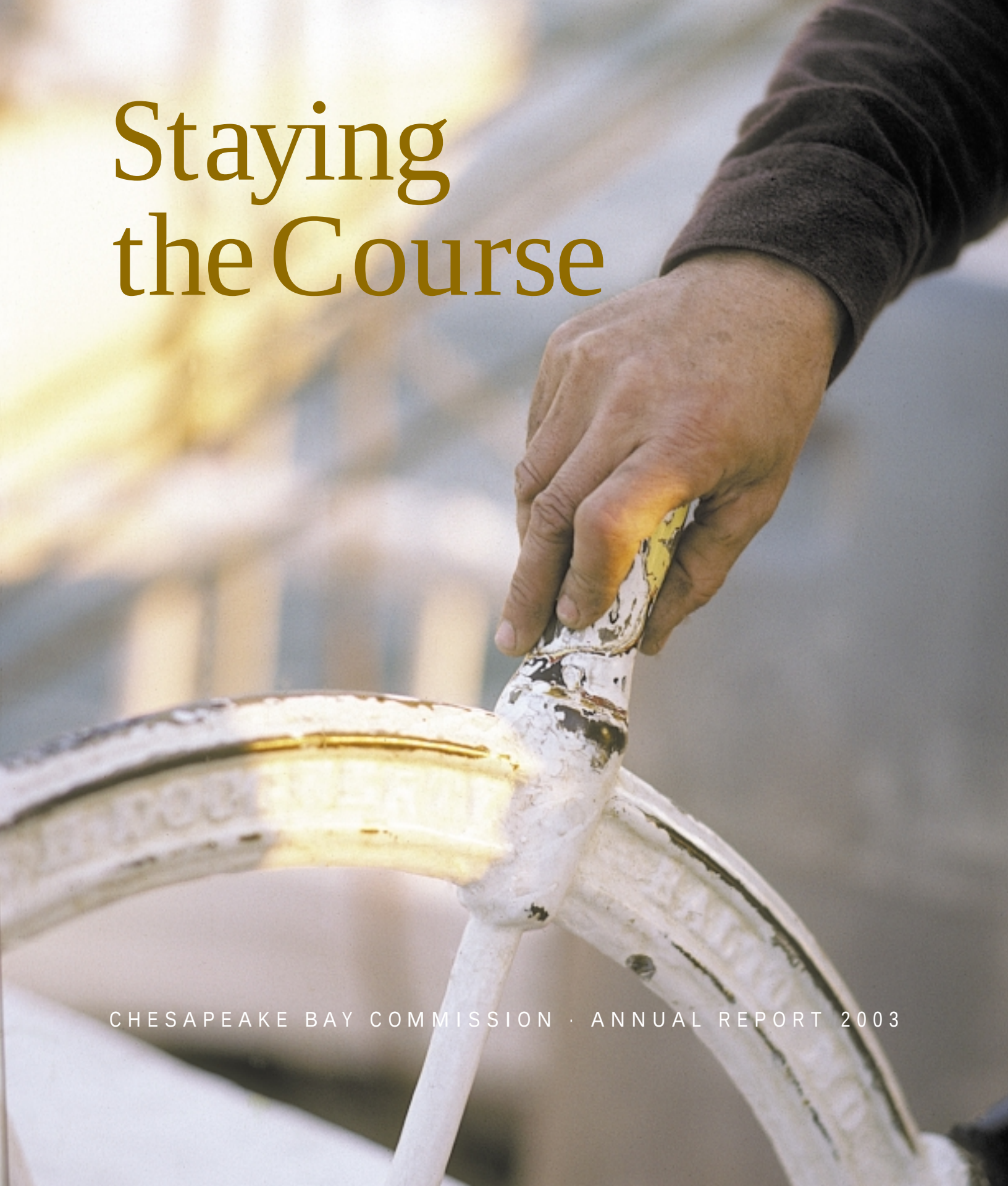
Staying the Course



CHESAPEAKE BAY COMMISSION · ANNUAL REPORT 2003

Chesapeake Bay Commission

Policy for the Bay

The Chesapeake Bay Commission

is a policy leader in the restoration of the Chesapeake Bay. As a tri-state legislative assembly representing Maryland, Virginia and Pennsylvania, its mission is to identify critical environmental needs, evaluate public concerns, and ensure state and federal actions to sustain the living resources of the Chesapeake Bay.

How far have we traveled? How much have we learned?

In the twenty-year journey of the Chesapeake Bay restoration, we have discovered the workings of America's largest estuary, shone a light on threats to its health, and mapped a route to reverse its decline. Now, as we seek the resources we need to reach our destination, we acknowledge what has fueled our journey thus far: the talent and determination of thousands of people who believe it can be done. Our pact with them, and with the Chesapeake Bay, is to stay the course.

Staying the Course

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The Role of the Commission

The Chesapeake Bay Commission is a tri-state legislative commission created to advise the members of the general assemblies of Maryland, Virginia and Pennsylvania on matters of Baywide concern. Issues addressed by its members are as wide-ranging and complex as the Bay itself, delving into matters of air, land, water, living resources and the integrated management of all of them.

Twenty-one members from three states define the Commission's identity and its workload. Fifteen are legislators, five each from Maryland, Virginia and Pennsylvania, who are responsible for identifying the needs of the Bay, hearing the wishes of their constituents and determining actions that make better stewards of all of us. Completing their ranks are the governors of each state, represented by cabinet members who are directly responsible for managing their states' natural resources, as well as three citizen representatives who bring with them a unique perspective and expertise.

The Chesapeake Bay Commission was created in 1980 to coordinate Bay-related policy across state lines and to develop shared solu-

BOX COMPASS, REBECCA RUARK · PHOTO © DAVID HARP

tions. The catalyst for our creation was the Environmental Protection Agency's (EPA) landmark seven-year study (1976–1983) on the decline of the Chesapeake Bay. With nearly a quarter-century of work behind it, the Commission has earned its reputation as a regional, bi-partisan leader. It has made remarkable strides in learning the complex workings of an enormous estuary, determining the federal and state actions that are needed to sustain its living resources, and persuading its colleagues in the general assemblies and executive branches to take action.

Today, despite two decades of effort, restoration continues to face daunting challenges. Having piloted *Chesapeake 2000* (c2k) to its successful adoption during more financially solvent times, the Chesapeake Bay Commission must now help to "stay the course" by ensuring that sufficient resources are committed and equitable policies are adopted that will keep the restoration effort on track.

Staying the Course provides a glimpse of the diverse activities of this unique assembly of legislators and resource policy makers, and the long-term commitment that they each hold to restoring the Chesapeake Bay. All are sustained by their vision of a clean and healthy Bay. All believe that productive partnerships at the federal, state and local level are a fundamental step toward attaining that vision. ■

Members and Staff of the Commission

The Hon. Robert S. Bloxom, Chairman * . . . . . Virginia House of Delegates
The Hon. J. Lowell Stoltzfus, Vice-Chairman * . . . . . Maryland State Senate
The Hon. Russ Fairchild, Vice-Chairman* . . . . . Pennsylvania House of Representatives
The Hon. Bill Bolling * . . . . . Senate of Virginia
The Hon. Thelma Drake . . . . . Virginia House of Delegates
The Hon. Bernie Fowler. . . . . Maryland Citizen Representative
The Hon. C. Ronald Franks . . . . . Secretary of Natural Resources, Maryland
The Hon. Brian E. Frosh . . . . . Maryland State Senate
The Hon. Emmett Hanger, Jr. . . . . . Senate of Virginia
The Hon. Arthur D. Hershey. . . . . Pennsylvania House of Representatives
The Hon. Irvine B. Hill . . . . . Virginia Citizen Representative
The Hon. James W. Hubbard . . . . . Maryland House of Delegates
The Hon. Kathleen A. McGinty . . . . . Secretary of Environmental Protection, Pennsylvania
The Hon. W. Tayloe Murphy, Jr. . . . . . Secretary of Natural Resources, Virginia
The Hon. Albert C. Pollard, Jr. . . . . . Virginia House of Delegates
The Hon. Alfred W. Redmer, Jr. . . . . . Maryland House of Delegates (January–July)
The Hon. Michael Waugh . . . . . Senate of Pennsylvania
The Hon. Michael H. Weir, Jr. . . . . . Maryland House of Delegates (August–present)
The Hon. Noah W. Wenger * . . . . . Senate of Pennsylvania
The Hon. George B. Wolff . . . . . Pennsylvania Citizen Representative
The Hon. John F. Wood, Jr. * . . . . . Maryland House of Delegates
The Hon. Peter J. Zug . . . . . Pennsylvania House of Representatives

* Members of the Executive Committee

Staff

Ann Pesiri Swanson. . . . . Executive Director
Thomas W. Beauduy. . . . . Pennsylvania Director
Melanie D. Davenport . . . . . Virginia Director
Patricia G. Stuntz . . . . . Maryland Director
Patsy S. Cress . . . . . Administrative Assistant (through June)
Paula W. Hose . . . . . Administrative Assistant (July–present)

Chapter 1 *The Commission's Work in 2003*

The Chesapeake Bay Commission is a policy leader across the full spectrum of Bay issues: from managing living resources and conserving land, to protecting water quality. By combining its unique access to both the legislative and executive branches of each Bay state with well-honed skills in research, policy-development and consensus building, the Commission has achieved consistently strong and effective results in pursuit of Bay restoration goals.

Four quarterly meetings combined with more frequent state delegation meetings ground the Commission in its work. All are well attended by members, their staffs, and various stakeholder groups, including the Admiral of the Mid-Atlantic Fleet (U.S. Navy) and other government and private sector partners. The Commission met four times in 2003: January (Annapolis, Md.); May (Washington, D.C.); September (Hershey, Pa.); and November (Solomons, Md.). Condensed agendas appear as Appendix II.

This chapter illustrates the broad diversity of activities undertaken by the Commission in 2003, and, in particular, demonstrates the

WATERLILIES, BLACKWATER RIVER · PHOTO © DAVID HARP

active role Commission members play among our many partners — the states, federal agencies, local governments, and the citizens and businesses of the region — in striving to meet the goal of a restored and healthy Chesapeake Bay.

State Legislative Activities

Each year, either individually or as state delegations, the members work with their state legislative and Congressional colleagues on Bay-related legislation. In many instances, the Commission plays a coordinating role, ensuring that legislative initiatives mesh among the states.

In 2003, in spite of the overwhelming focus on financial matters, the Commission members sponsored, amended and supported legislation and budget initiatives in all three Bay states improving the management of water, land, air and living resources.

Also this year, as the Bay community reflected on the 20th anniversary of the signing of the first Chesapeake Bay agreement, the Commission published a summary of two decades of legislative progress on behalf of the Chesapeake Bay. Chapter 2 summarizes these achievements.

The following are highlights from each of the three states' legislative sessions:

Maryland

- In Maryland, Commission members supported and sponsored legislation that will: improve the management of non-native aquatic species; establish reciprocity in the issuance of charter boat permits; and provide incentives for hybrid motor vehicles that meet federal low-emission exhaust standards. In addition, Commission members successfully sponsored legislation to expand criminal and civil penalties related to violations of sediment control, stormwater management, and wetlands and riparian rights provisions.
- Commission staff from Maryland and Virginia provided a half-day seminar to the Maryland Department of Legislative Services reviewing environmental policy issues associated with attainment of the Chesapeake Bay restoration goals. The presentation contrasted the differing yet comparable policy approaches taken by the two general assemblies.

Pennsylvania

- In Pennsylvania, Delegation members sponsored or co-sponsored legislation that, if enacted during the 2-year session that concludes in 2004, will: by subsequent referendum, amend the uniformity clause of the Pennsylvania constitution to provide special tax provisions for land conservation; amend the Tax Reform Code to provide for $1/acre valuation of land under agricultural conservation easement for inheritance tax purposes; create an alternative fuels incentive program; and create a tax credit program to "incentivize" reclamation of abandoned mine land.

Virginia

- Virginia House Joint Resolution (HJR) 633 directed the Virginia Delegation of the Commission to study the collection of rents and royalties for the use of state-owned subaqueous bottomland. The resolution also called upon the delegation to evaluate a regulatory framework for off-bottom aquaculture

and proposals for shallow water management. Four public hearings were held to discuss these issues and collect comments from the public, scientists, lawyers, agency staff and other interested parties.

- The delegation agreed to recommend to the General Assembly that a moratorium on collection of bottomland lease assessments be lifted, beginning July 1, 2004. This recommendation also extends to new projects (those initiated after July 1, 2004) that do not involve the exercise of a riparian right. It will also sponsor legislation in 2004 to create a water column lease for off-bottom aquaculture and ask the Virginia Institute of Marine Science to continue to study how shallow water use designations could be developed and implemented.
- Virginia Delegation members supported or sponsored legislation that will: provide additional environmental and public health protection in the use of biosolids; develop a certification process for low impact development techniques; and prohibit the possession of non-indigenous nuisance species. The General Assembly also passed a Commission-sponsored resolution urging Congress to adopt legislation to fund nitrogen reduction technology at sewage treatment plants in the Chesapeake Bay watershed.

Congressional Activities

The federal share of the Bay restoration effort to date has been, on average, one-fifth, or 18 percent, of the total Bay restoration expenditures. Assuming that this proportionate share of support will be continued to 2010, when nutrient reduction goals are to be achieved, the federal dollar amount will need to triple. In 2003, garnering the Congressional support needed to increase federal funding became an important undertaking of both members and staff.

The Commission's Work in 2003

- In May 2003, the Commission spent a day on Capitol Hill, meeting with 24 of the watershed's most influential U.S. House and Senate members to gain support for enhanced federal funding for Chesapeake Bay initiatives. Details outlining the package of six bills supported by the Commission are provided in Chapter 3.
- The Commission established the Congressional Advisory Council. In prior years, the Commission had worked with its Bay partners to determine the costs of implementing *Chesapeake 2000* and identify forthcoming federal legislation that could be supportive. Now, the Council will focus directly on these legislative mechanisms in an effort to bolster federal funding streams in the watershed.
- Commission staff met with White House staff to solicit the support of President George W. Bush for enhanced funding for the Bay region.
- Laying the groundwork to incorporate a stormwater management fund in the Surface Transportation Act (SAFE-TEA) commanded much staff attention in 2003. Staff worked closely with both House and Senate members to provide technical and drafting assistance. Since no Congressional action was taken on the measure in 2003, and the Act's funding pool may not expand, the inclusion of stormwater provisions in the Act

remains a significant Congressional question for 2004.

- The Commission worked with members of the U.S. Senate to ensure that increased appropriations were provided to our federal partners, including the National Oceanic and Atmospheric Administration (NOAA), the Forest Service, and the National Park Service, all of which maintain programs focused on the watershed.

Review of Proposed Federal Actions

- The Commission commented on the U.S. Environmental Protection Agency and Army Corps of Engineers Advanced Proposed Rulemaking regarding the definition of "isolated waters" under the Clean Water Act. The proposed rule would have eliminated from federal jurisdiction and permitting, wetlands that lacked surface water connections to other wetlands and streams located within the upper reaches of watersheds, known as headwater streams. Staff noted that these waters and wetlands perform valuable ecological functions and asked that they continue to receive federal protection.

- The Federal Energy Regulatory Commission (FERC) requested the Commission to comment on a Draft Environmental Assessment for its proposed action and alternatives at the Harvell Dam on the Appomattox River in Petersburg, Virginia. Installation and operation of fish passage at this dam, or dam breach, will open approximately 133 miles of river to anadromous fish. The Commission noted that FERC's proposed action, which is revocation of the current dam operating license with cessation of project operations, would not address existing fish blockage, and recommended that FERC find either of its proposed alternatives as its recommended action.

Executive Branch Partnerships

The success of the Commission's work is grounded in its close working relationships with the executive branch agencies. As administrations have changed in the region, the Commission has worked to maintain these partnerships and explore opportunities that come with fresh outlooks. Staff continue to participate in the Maryland Bay Workgroup, the Virginia Chesapeake Bay Interagency Work Group and the Pennsylvania Chesapeake Bay Advisory Committee, all of which help us to better coordinate with high-level representatives of executive branch agencies who participate in the Chesapeake Bay Program.

- Commission staff met with Maryland Governor Robert L. Ehrlich, Jr.'s staff to suggest areas of collaboration for enhancing federal funding for the Bay and in developing state policies to advance the Bay restoration. Staff also offered its recommendations to the "Mandel Commission" on how Governor Ehrlich could reconfigure his administration to best address the challenges of Bay restoration.

- Staff served on the Virginia Wetlands Enhancement and Restoration Coordinating Committee of the Virginia Department of Environmental Quality (VDEQ). This committee was formed as a tool to aid in the voluntary preservation, restoration and creation of wetlands throughout Virginia and is

From the Maryland Delegation Chairman

Senator J. Lowell Stoltzfus

This was a particularly challenging year for the Bay restoration effort. Our 2003 legislative session began with the release of the Commission's *The Cost of a Clean Bay* report, identifying a $2.9 billion funding gap in Maryland over the next eight years to fulfill its commitment to *Chesapeake 2000.* Faced with a severe budget crisis, our goal for FY 2004 was limited to defending what environmental program funding we had. By the end of the session, it was reduced by roughly 3 percent.

Still, Maryland continued to make progress by preserving a 25,203 acre parcel of forest land in seven Eastern Shore counties. The acquisition, which was the result of a joint venture of non-profit, corporate, state and federal partners, reflects Maryland's continued bi-partisan support for conservation of the state's natural lands.

I am particularly impressed by the initiative of Maryland's agricultural community in using federal Conservation Reserve and Enhancement Program (CREP) funds to implement conservation management practices. Maryland was the first state in the nation to develop a CREP program. On my Eastern Shore cabbage farm, CREP funds have enabled me to plant 130,000 trees over 170 acres, and I have placed 340 acres of my land under permanent easement. I am convinced that with proper education, technical assistance and cost-share opportunities, the voluntary system can and will work. These practical incentives allow families like mine to directly contribute to the Bay's restoration and protection. Equally important are those state programs that keep agriculture viable by retaining our open spaces and natural landscapes and inhibiting sprawl.

This year's extreme rain and snow, topped off by Hurricane Isabel, proved how our actions on the land affect the quality of the water. It was a tough year for crabs and oysters and those who harvest them. What is encouraging is that we have in place a number of outstanding programs to upgrade wastewater treatment plants, reduce and treat stormwater runoff, promote natural shoreline stabilization and showcase low impact development techniques. The members of the Maryland Delegation and I are determined to work with our colleagues, our constituents and our Governor to find equitable ways to increase the pace of progress and meet our goals for the Bay.

J. Lowell Stoltzfus

designed to help Virginia reach its wetlands restoration goals of the Bay agreements. In 2003, the committee explored financial and technical resources for wetland restoration and conducted citizen training workshops on evaluating wetland restoration success.

- Staff was appointed to serve on the State Advisory Board on Air Pollution, which provides technical and legal analysis to the Virginia Air Pollution Control Board. Baywide, air pollution contributes roughly one-third of the nitrogen load to the Bay. During 2003, the Advisory Board prepared policy reports on three issues: improving public participation and education in the air permitting process; federal new source review reform; and implementation of the new federal air quality standard for particulate matter (PM 2.5).
- Staff was appointed to serve on the Pennsylvania Chesapeake Bay Tributary Strategy Steering Committee. The committee is charged with providing policy, planning and technical guidance to the Department of Environmental Protection's 13 watershed teams responsible for developing the Commonwealth's nutrient and sediment reduction strategies.

National and International Relations

The Commission has played a prominent role in the region's environmental policy for the last quarter century. It is frequently called upon to share its insights and institutional memory.

- In January 2003, the Commission served as the Bay region's lead representative at the University of Miami's Center for Ecosystem Science and Policy colloquium to study the lessons learned from the country's five largest ecosystem-based restoration efforts. The study, which compares and contrasts the programs of the Cal-Fed Delta, Upper Mississippi River, Platte River, Everglades and Chesapeake Bay, will be published in 2004.
- Commission staff provided overviews to visitors and consultants representing similar efforts in Brazil, China, Thailand, the Great Lakes, Louisiana, California and Rhode Island.

Chesapeake Bay Program Leadership

The Commission is a signatory to all three Chesapeake Bay agreements, and serves as one of six members of the Chesapeake Bay Program's top leadership, the Chesapeake Executive Council. As such, the Commission plays a guiding role in all aspects of the Program's policy development and restoration activities. It brings inter-jurisdictional, bipartisan perspective to the Bay Program that balances the more specific interests of the states' executive branch agencies. Its broad-based nature also makes it an excellent vehicle for building consensus on challenging regional policy issues. Some highlights of the Commission's 2003 involvement in the Program include:

- As the 2003 Chairman of the Commission, Delegate Robert S. Bloxom (R-Va.) served as a member of the Chesapeake Executive Council.
- Commission staff held positions on all leadership committees within the Bay Program, contributing policy direction and budget guidance to the Program. In 2003, staff participated on the: Princi-

From the Pennsylvania Delegation Chairman

From my perspective, much of the attention and energy that we focused on the Bay restoration in 2003 built upon the Commission's report, *The Cost of a Clean Bay,* a financial analysis of the *Chesapeake 2000* commitments that I requested while serving as Commission chair in 2002. Then, as now, I feel that our long-term success hinges on honing our priorities. We must soundly manage our limited financial resources and seek more innovative and cost-effective ways to reach our C2K goals, which come with a $19 billion dollar price tag. Resourceful ways to close the daunting budget gap of $13 billion dollars has been the overriding concern of the signatory partners administering the restoration effort, as they look even harder, both internally and externally, for funding opportunities.

Representative Russ Fairchild

With funding in mind, the Pennsylvania Delegation brought forward a resolution in 2003, unanimously supported by the full Commission, which calls on the Congress to reauthorize the federal Abandoned Mine Reclamation Fund for an additional 25 years. We have urged the Congress to modify the funding formula currently in use. At present, funds for safety and reclamation are distributed to the states based upon current mining activities. This does not mitigate the impacts of past mining practices, whose pollution continues to foul Pennsylvania's waters.

There are more than 100,000 acres of abandoned mine lands and over 1,300 miles of streams impaired by acid mine drainage in the Commonwealth. Addressing these impacts will help us meet our watershed restoration goals and improve fish passage, since many of these contaminated streams act as chemical blockages, discouraging migrating fish from passage.

As a result of the advocacy of a host of interests, including the Commission, the Congress will be considering a proposal in 2004 that will not only extend the Fund for 25 years, but will also modify the formula to match historic production. The result would be hundreds of millions of dollars going to Bay states to further our reclamation efforts. It's the very type of opportunity that *The Cost of a Clean Bay* report calls out for, and we will continue to be its advocate in 2004.

Russ Fairchild

pals' Staff Committee, Implementation Committee, Budget Steering Committee, Nutrient Subcommittee and its Sediment Workgroup, Water Quality Steering Committee, Living Resources Committee and the ad-hoc Air Work Group.

- Staff also participated in the ad hoc panel established under the *Chesapeake Bay Policy for the Introduction of Non-indigenous Aquatic Species* for the review of the Virginia Seafood Council's proposal to conduct large scale aquaculture tests on *Crassostrea ariakensis*, the Asian oyster. In December 2003, the staff worked with the Scientific and Technical Advisory Committee of the Bay Program to identify research that should precede any decision to introduce reproductive *C. ariakensis* to the Bay.

- In 2003, the Chesapeake Bay Program determined the allowable nutrient loads for each tributary in the basin that would collectively protect the Bay's aquatic resources. The Commission served as a voting member of the Water Quality Steering Committee, charged with this analysis. Details are provided in Chapter 4.

- On December 9, 2003, the Chesapeake Executive Council met in northern Virginia. Commission Chairman Bob Bloxom provided the members with a status report on crabs and an overview of the new goals set for riparian forest buffers and urban tree canopy cover. He further highlighted the Commission's efforts to secure increased federal funding in order to further our nutrient reduction goals. Chairman Bloxom signed three directives on the Commission's behalf, focusing on crabs, trees and nutrients. All are posted on the Chesapeake Bay Program's website at *www.chesapeakebay.net*.

- As part of its directive, *Meeting the Nutrient and Sediment Reduction Goals*, the Chesapeake Executive Council called for the creation of a Blue Ribbon Panel to identify mechanisms to finance Bay restoration. The Commission will be both represented and help to staff the Panel, whose report is due in October 2004.

- Following the January 2003 release of the Commission's *The Cost of a Clean Bay* report, Bay Program committees and partners were briefed on the findings and the associated policy implications for the Bay restoration. These briefings helped the partners to focus their budget enhancement requests.

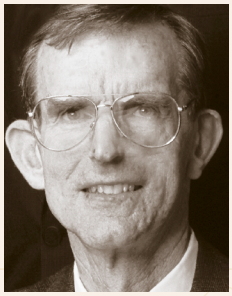
- The Commission conducted a study with the Chesapeake Bay Program's Federal Agencies Committee to assess FY 2002 federal agency funding for *Chesapeake 2000* (c2k) initiatives. An important complement to *The Cost of a Clean Bay*, the analysis provided, for the first time, an evaluation of Bay-related activities conducted by the federal agencies, the level of funding support, and potential areas of collaboration among agencies.

- Staff participated in the U.S. Forest Service's five-year federal program review. The consultation evaluated the ecological and economic benefits of implementing several new or enhanced programs.

- As a member of the ongoing Gateways Working Group, Commission staff

From the Virginia Delegation Chairman

Not only does this year mark the twentieth anniversary of the Chesapeake Bay restoration effort, it also marks the end of my 23 years in the Virginia legislature working for the Bay.



Delegate Robert S. Bloxom

I must admit, when we came together in December 1983, I did not expect our challenge would be so monumental. It was only slowly, after many years of Commission meetings, that we began to realize that the ecology of the Bay was far more complicated that we first thought, that the interactions among living resources, water quality, air emissions and land use are more complex, and that the solutions more expensive and politically challenging than we could ever have known.

I know that we have achieved successes in which we can take pride. We banned the use of phosphate detergents, required the use of erosion and sedimentation control practices, encouraged the use of agricultural nutrient management planning and protected critical Chesapeake Bay resource areas from development. We preserved open space lands, restored the stripped bass fishery and worked to secure funding for fish passage projects throughout the basin. More recently, we have committed to significant reductions in nutrient and sediment loads entering the Bay, developed an ecologically based target and threshold for the blue crab fishery, and moved forward to enhance our resource lands through riparian forest buffers and urban tree cover.

In January of this year, the Commission published its landmark economic study, *The Cost of a Clean Bay,* which clearly shows that money is the greatest impediment we face in restoring the Bay. We know what to do and how much it will cost. We do not know how to pay for it.

Fortunately, Virginia has enacted a number of innovative financing programs such as the 1992 Chesapeake Bay Restoration Fund, the 1997 Water Quality Improvement Fund and the 1997 Chesapeake Bay Restoration Contribution. While these are important, we need to go much further. The federal government, the states, private organizations, and even individual citizens must acknowledge that restoring the Bay will take the allocation of significant financial resources and creative funding partnerships. Unless we can soon identify realistic sources of funding at each level of government, we run the unthinkable risk of failing to achieve our C2K goals and bring back the Chesapeake Bay.

Robert S. Bloxom

participated in a year-long National Park Service Special Resource Study to assess the potential for a National Park or Water Trail designation in the Bay region.

Water Quality Protection and Restoration

It is widely recognized that in order to restore its waters to a "clean Bay" status — thereby removing the Chesapeake Bay from the federal "impaired waters" list — will require nutrient reductions of about 50 percent. Translated into action, this means that we will need to double, if not triple, the reductions already achieved since 1985.

- To that end, Commission staff participated in the Water Quality Steering Committee, the group charged with developing criteria to ensure attainment of the water quality necessary to de-list the Bay. The criteria were issued in April 2003 and apply to shallow, mid-, and deep-water zones. They will trigger the promulgation of water quality standards in all six states — Maryland, Pennsylvania, Virginia, New York, Delaware and West Virginia — that use improved clarity and dissolved oxygen levels as measures of success. If the region does not adequately improve its water quality conditions by 2010, a federal Total Maximum Daily Load (TMDL) will be imposed the following year.

- The Commission continued to focus on the major contributors to water quality degradation — agriculture, point sources, air and stormwater — as it worked to promote programs at both the state and federal levels. These efforts focused on providing nitrogen removal technologies at major wastewater treatment plants, cost-sharing for agricultural cover crops and testing of the "Yield Reserve Program," and increasing funding for stormwater management.

- Delegate James H. Hubbard (D-Md.) and Commission staff participated in a review of proposed changes to the Federal Clean Air Act and their impact on Northeastern states, as part of a conference by the National Conference of State Legislatures.

- Commission staff participated in efforts to examine the potential for nutrient trading within the Bay watershed. Representatives from regions of the country where trading has been implemented provided insight into the challenges of establishing such a program here.

- The Commission continued to pursue federal funding for the Chesapeake Bay Shoreline Erosion Study, initially authorized and funded in FY 2002. The authorization goes beyond shoreline erosion to include an examination of management measures that would address sediments building up behind the dams on the lower Susquehanna River.

Living Resource Protection and Restoration

Restoring the Bay's water quality is a means to an end. Ultimately, the vigor of the Bay's living resources — crabs, oysters, migratory fish and native water-

fowl — will be our clearest indicator of success. The Commission continued to work to improve habitat conditions and to identify opportunities to refine the management of our fisheries. Foremost in the effort was the Commission's work to address improved management of the blue crab.

- The Commission continued its sponsorship of the Bi-State Blue Crab Advisory Committee (BBCAC) chaired by Delegates John F. Wood, Jr. (D-Md.) and Bob Bloxom (R-Va.). At its Technical Work Group (TWG) meeting in June 2003, the 29 members discussed tracking mechanisms to measure each jurisdiction's reduction in fishing effort, and progress toward reaching the blue crab fishing target of doubling the spawning stock Baywide. In addition, the work group reviewed the status of the crab population, the effectiveness of spawning sanctuaries, the role of stock introductions and the results of the recreational crab survey.
- Following the loss of continued funding from the states, the BBCAC held its final meeting in July 2003 and turned its responsibility for bi-state policy negotiations back to the management agencies. The Commission refused to allow the BBCAC Technical Work Group to dissolve in order to maintain a steady flow of up-to-date scientific advice. The TWG issued its first annual status report in November 2003. It outlines the remaining work to be done in addressing the BBCAC 10-Point Action Plan, first presented in 2001.
- Commission members Senator J. Lowell Stoltzfus (R-Md.) and Delegate John Wood (participated in the Maryland Blue Crab Task Force during 2003. This group, comprised of legislators, scientists, and recreational and commercial crabbers, was convened by the Maryland Department of Natural Resources to assess key issues affecting its crab fishery and to develop a long-term perspective on future blue crab management policies.
- In 2003, both Delegates Bob Bloxom and John Wood participated in legislative hearings concerning the regulation of the blue crab. Their counsel was to stay the course recommended by BBCAC — to employ management measures that will result in a doubling of the spawning stock.
- The Commission continues to support the efforts of the Virginia Oyster Heritage Program and the Maryland Oyster Recovery Partnership to restore the native oyster, Crassostrea virginicus, through the development of oyster reefs and adjacent sanctuaries.
- The Commission participated in the concluding meetings of the National Academy of Science's study on the ecological and economic implications of introducing the non-native oyster species, *C. ariakensis*. In 2003, the Commission worked with the U.S. Congress to authorize and fund the U.S. Army Corps of Engineers to conduct an Environmental Impact Statement on the introduction of reproductive Asian oysters. With this Congressional authorization, the Corps is now the lead agency in the study, and the Virginia Marine Resources Commission and the Maryland Department of Natural Resources are designated as co-lead agencies.

Vital Habitat Protection and Restoration

The flowing rivers, meandering creeks, hidden coves and prolific grass beds of the Chesapeake Bay watershed contain the habitats needed to support the Bay's living resources. Wetlands, forests, sea grass beds, bottom reefs and tidal pools each contribute to the web of life that defines the region's productivity. It is an ongoing challenge of the Commission to ensure that these habitats are protected and restored in order to sustain the Bay's creatures and enrich the lives of its people.

- Commission staff was involved in revising the Riparian Forest Buffer initiative, signed at the 2003 Executive Council meeting. This initiative increases our riparian forest buffer goals. It also, for the first time, establishes goals for expanding the urban tree canopy cover as a cost-effective means of reducing urban stormwater runoff.
- The Commission continues to explore policy options to address the use of the Bay's underwater bottomlands. The Virginia Delegation is particularly focused on solving conflicts that arise between the practice of aquaculture and the natural growth of sea grasses and is developing a state system for leasing bottomlands and the water column, which is particularly important as interest in aquaculture expands.
- The Commission adopted a resolution in September calling on Congress to reauthorize the Abandoned Mine Reclamation Fund established under the federal Surface Mining Control and Reclamation Act of 1977 (see Appendix 1).

Sound Land Use

There is an undeniable link between the health of Bay waters and the stewardship of the huge area of land that comprises its watershed. The land-to-water ratio in the Chesapeake Bay is larger than any other estuarine body of water on earth. With a water surface for the tidal Bay of only 4,000 square miles and a watershed of 64,000 square miles, land surface exceeds water surface by more than 16 times. How we treat the land profoundly influences the quality of the water. The Commission continues to seek opportunities at both the state and national levels to promote sound land use and engage decision-makers at the local level.

- Senator Noah W. Wenger (R-Pa.) addressed the Philadelphia Society for the Promotion of Agriculture on the role of Pennsylvania agriculture in restoring the Chesapeake Bay. The Society is the oldest agricultural organization in the United States, and includes Benjamin Franklin amongst its former members.
- Commission staff participated in state forums addressing the removal of impediments to low impact development. This type of development utilizes techniques such as rain gardens, green roofs, and proper site planning and design to minimize runoff from residential and commercial sites.

Individual Responsibility and Community Engagement

The Chesapeake Bay's health is dependent upon the actions of every citizen in the watershed, both today and in the future. The cumulative sum of each individual's

pollutant load can be staggering. There is, therefore, an enormous and tangible benefit derived from individual and community-based watershed efforts to reduce pollution and habitat degradation. The Commission is committed to nurturing this stewardship by engaging our citizens, supporting local efforts, offering our technical and political expertise, and bolstering environmental education in our school systems.

- In order to encourage the financial support of the private sector, the Commission partnered with the Chesapeake Bay Trust and an advisory panel of private philanthropic foundations to launch a Bay Area Funders' Network. The Funders' Network met two times in 2003.
- The Commission assisted in obtaining Baywide Congressional support for the EPA Small Watersheds Grants Program for the fourth year. This program provides $1.75 million in 50:50 matching grants to support local community-led restoration and protection projects throughout the Bay watershed.
- The Commission co-sponsored a National Park Service conference that brought together managers of Gateways Network sites. More than two hundred strong, these sites invite visitors to learn about the Bay's natural and cultural resources.
- At its September meeting, the Commission reviewed the proposed alternatives under consideration by the National Park Service for designation of a Chesapeake Bay National Park and sent a letter endorsing key components to the National Park Service.
- Commission staff provided briefings, classroom seminars and a keynote address to environmental educators on the development of their environmental curriculum and programs.
- Representative Russ Fairchild (R-Pa.) gave the keynote address at the dedication of a new 32-mile section of the Susquehanna River Water Trail, which now extends from Harrisburg north to Sunbury, Pennsylvania. Funding for the trail extension project was provided to the Alliance for the Chesapeake Bay and the Susquehanna River Trail Association by the Pennsylvania Delegation to the Commission.
- With funding support provided by the Pennsylvania Delegation and others, the Susquehanna Greenway Partnership completed planning for the Susquehanna Greenway, which will engage communities in the development of a Greenway vision and a mapping database.
- Throughout the year, Commission members and staff offered keynote addresses, conference and symposium presentations, community group discussions, media interviews, and written reports.

Reflecting On Our Work

The challenge of restoring the Bay must be viewed in its entirety, with no single project addressed in isolation of the others. The activities listed above are testimony to the Commission's recognition of this fact.■

Chapter 2 *Two Decades of Legislative Progress*

The restoration of the Chesapeake Bay began in earnest twenty years ago, with the signing of the 1983 Chesapeake Bay Agreement. The Chesapeake Bay Commission and its partners in the Bay Program — the Governors of Maryland, Pennsylvania and Virginia, the Mayor of the District of Columbia, and the Administrator of the U.S. Environmental Protection Agency — believed that through cooperative partnership, using regulations and incentives, they could reverse decades of man-made decline in our nation's most abundant estuary.

Perhaps no other activity better defines the work of the Chesapeake Bay Commission and its role as a Bay Program partner than its efforts to advance legislation at the state and federal levels. Since its inception, the Commission has recognized that each Bay state must devise its own approach to the problems facing the Chesapeake Bay in order to address the cultural, financial and ecological conditions of its jurisdiction. It also recognizes that to do so, the legislative branches of each jurisdiction must be fully engaged in devising that approach.

ROAD IN THE WOODS, HARFORD COUNTY · PHOTO © DAVID HARP

The list below reflects both the breadth of subject and the diversity of approaches that have been used. In many cases, a watershed-wide approach has been achieved, as with the passage of the phosphate detergent bans throughout the region. In other instances, such as the management of fisheries whose habitats extend beyond the waters of the Bay, federal legislation has been the appropriate vehicle.

Regardless, the list stands as testimony to the dedication of the state general assemblies and the U.S. Congress in the protection of the Bay. Together, they have laid a strong foundation of environmental law in the region that has contributed sizably to the restoration of the Bay. The Commission has played an instrumental part in this effort.

The legislators who have been a part of the Commission are proud of the laws that they have passed in defense of the Chesapeake Bay. Clearly, the work of the Commission, the general assemblies and the partners in the Bay Program is far from complete. The rate of nutrient reduction must be doubled in the next decade, more habitats must be protected and restored, and land management approaches must be fine tuned. This list catalogues our accomplishments as legislators. It is the foundation for policy changes that lie ahead.

Legislation and Major Policy Initiatives

Nutrient/Sediment Pollution

- Water and Sewer Assistance Authority (VA 1984)
- Water Facilities Revolving Fund (VA 1986)
- Phosphate Detergent Ban (MD 1985, VA 1987, PA 1989)
- Erosion and Sediment Control (MD 1983, VA 1980 & 1989)
- Sewage Treatment Plant Compliance (MD 1990)
- Stormwater Control (VA 1991; MD 1982 and 1985)
- Agricultural Nutrient Management (PA 1993; MD 1988)
- Forestry “Bad Actor” (VA 1993)
- Nutrient Management Certification (VA 1994; MD 1993)
- Agriculture-Linked Investment Program (PA 1994)
- Agricultural “Bad Actor” Law (VA 1996)
- Water Quality Improvement Act (VA 1997)
- Tributary Strategies Act (VA 1997)
- Poultry Waste (VA 1999)
- Animal Waste Technology Fund (MD 1999)
- Sewer Overflow and Treatment Plant Bypass Reporting (MD 2001)

Living Resources

- Striped Bass Management (Fed. 1988)
- Clean Vessels (Fed. 1991)
- Susquehanna River Fish Passage Resolutions (MD, VA & PA 1992)
- National Invasive Species (Fed. 1996)
- Fisheries Management Planning (MD 1997; VA 1996, 1995 and 1992)

- Prohibition on Hydraulic Clam Dredging (MD 1998)
- Bi-State Blue Crab Strategy Development (MD and VA 1999)
- Recreational Crab License (MD 2001)
- SAV Protection Zones (MD 2002)

Land Stewardship

- Critical Area Protection (MD 1984 and 1985)
- Chesapeake Bay Lands Preservation (VA 1988)
- Growth Management Commission (VA 1989)
- Farmland Conservation & Agricultural Security (PA 1989)
- Consolidated Lands Preservation (MD 1990)
- Wetlands Enforcement (VA 1990)
- Land Conservation Fund (VA 1991)
- Income Tax Credit (VA 1991)
- Forest Conservation (MD 1991)
- Economic Growth, Resource Protection and Planning (MD 1992)
- Land Recycling & Environmental Remediation Standards (PA 1995)
- Phragmites Control (MD 1996)
- Smart Growth Legislation (series of three bills): Brownfields, Rural Legacy, Smart Growth (MD 1997)
- Open Space Lands Preservation (VA 1997)
- National Forest Buffer Initiative — NRCS (Fed. 1997)
- Supplemental Agricultural Conservation Easement Purchase (PA 1999)
- Municipalities Planning Code Omnibus Amendments — Sustainable Growth (PA 2000)

Others

- Clean Water Act (Fed. 1987)
- Oil Spill Prevention, Liability and Compensation (MD 1990, VA 1991)
- Conservation and Recreational Foundation (VA 1992)
- Chesapeake Bay Trust (MD 1985 and 1989)
- Chesapeake Bay License Plate Fund (MD 1990; VA 1992)
- Environmental Education (PA 1993)
- Vehicle Emissions Control (PA 1992, VA and MD 1993)
- Water Quality Toxics (VA 1997)
- Recreational Boat Pollution (MD 1992, 1994 and 1999)
- Farm Bill (Fed. 1996 and 2002)
- Chesapeake Bay Partnership Council (VA 1996)
- Small Watershed Grants (Fed. 1997)
- Clean Water Action Plan (Fed. 1998)
- Chesapeake Bay Gateways (Fed. 1998)
- "Growing Greener" — Environmental Stewardship and Watershed Protection (PA 1999)
- Marine Habitat and Waterways Improvement Fund (VA 2000)
- Water Resources Planning (PA 2002).

Chapter 3 *Expanding the Federal Commitment*

Federal funding has played, and will always play, a crucial role in supporting the Chesapeake Bay restoration. It has been a catalyst for the formation of the Bay Program and its many partnerships, allowing us to leverage considerable state and private dollars. Federal funding has covered almost one-fifth (18 percent) of Bay cleanup costs to date. But, even at this level and with all the additional state and private dollars raised, we are still far short of achieving our goals.

According to the Commission's *The Cost of a Clean Bay* report, in order to achieve c2k water quality goals by 2010, we need to secure a total of $18.7 billion over the next seven years from all sources. This means that the federal commitment must at least triple in size, to $3.5 billion over the next seven years, in order to maintain the federal contribution level at the current 18 percent. Making a persuasive case to Congress by breaking down the restoration costs into their component parts has been a focus of the Commission this year. As Chairman Bob Bloxom put it, we need to break our projections down into "biteable bites."

MIGRATING TUNDRA SWANS · PHOTO © DAVID HARP

IN MAY 2003, armed with the analysis provided by the Commission's The Cost of a Clean Bay report, Commission members and staff met with their Bay region colleagues in the U. S. House of Representatives and Senate. Crisscrossing Capitol Hill in two dozen meetings, Commission members made the case that finding resources within existing federal programs is one of the best investments we can make to benefit the Bay. Commission staff followed up with meetings at the White House and with the President's Council on the Environment to help the Administration focus on specific policy actions to keep the Bay restoration on course.

The Virginia Delegation meets with Senator John Warner's Legislative Director, Ann Loomis, to thank her and her boss for their consistent efforts to protect Chesapeake Bay.

HOW TO TRIPLE FEDERAL FUNDING

STEP 1

Promote existing and new federal programs targeted to our region. Build Congressional support for authorization and appropriations bills to support the water quality, land conservation and environmental education goals of the Chesapeake Bay agreements.

STEP 2

Provide federal cost-share grants to localities in the six-state basin. Funds will pay for the installation of advanced nutrient removal technology at 300 of the region's largest wastewater treatment plants. (Legislative Vehicle: The Chesapeake Bay Watershed Nutrient Removal Assistance Act S827; HR568)

Virginia Senator Emmett Hanger discusses federal funding to support agricultural conservation.

Brian Frosh and Delegate Jim Hubbard reunite with former Maryland General Assembly colleague Congressman Ben Cardin.

LEFT: Maryland Senator Brian Frosh stresses the importance of addressing stormwater in the reauthorization of the Surface Transportation Act.

RIGHT: Secretary of Natural Resources Tayloe Murphy, Jr. discusses Virginia's conservation funding with Senator Warner's staff member, Ann Loomis.

HOW TO TRIPLE FEDERAL FUNDING

STEP 3

Persuade Congress to fund mitigation of stormwater runoff from roads and highways. In the Chesapeake Bay, runoff from highways is estimated to contribute 22 percent of the urban nitrogen and 32 percent of the urban phosphorus. (Legislative Vehicle: Reauthorization of the Surface Transportation Equity Act, SAFETEA)

STEP 4

Improve the federal Farm Bill's provisions for farmland preservation and water quality improvement. Create a special USDA-funded program to demonstrate four innovative management practices on agricultural lands in the Bay watershed. (Legislative Vehicle: The Farm Bill and the USDA proposal entitled "The Chesapeake Bay Working Lands Nutrient Reduction Pilot Program")

Virginia Delegate Thelma Drake makes a case to Congressman Tom Davis (Va.) for federal funds to upgrade the basin's 300 major wastewater treatment plants.

Virginia Senator Bill Bolling and Chairman Bloxom take a moment to confer.

Delegate Jim Hubbard thanks Maryland Senator Paul Sarbanes' longtime aide, Charlie Stek for his concerted efforts to protect Chesapeake Bay.

Pennsylvania Representative Art Hershey and Executive Director Ann Swanson discuss the water quality of Congressman Jim Gerlach's native river, the Susquehanna.

HOW TO TRIPLE FEDERAL FUNDING

STEP 5

Provide federal funding to the states to sustain their commitment to environmental education. Grants would enable schools to offer meaningful outdoor watershed experiences to students, beginning with the graduating class of 2005. (Legislative Vehicle: Chesapeake Bay Environmental Education Pilot Program Act, S.828)

STEP 6

Establish a funding mechanism within the U.S. Army Corps of Engineers to support local, small-scale Bay conservation efforts. This will parallel the grant-making programs of EPA, NOAA, the Forest Service and U.S Fish and Wildlife Service. (Legislative Vehicle: Chesapeake Bay Environmental Restoration and Protection Program S.829)

Congressman Donald Sherwood discusses the best remedies for Pennsylvania's acid mine drainage with Delegates Art Hershey and Russ Fairchild, Citizen Representative George Wolff and Ann Swanson.

Pennsylvania Representatives Pete Zug, Art Hershey (back) and Russ Fairchild spend a collegial moment with Congressman Donald Sherwood.

Bob Bloxom and Virginia Director Melanie Davenport.

Maryland Delegate John Wood and Senator Bernie Fowler discuss the conservation needs of southern Maryland with long-time colleague Congressman Steny Hoyer.

HOW TO TRIPLE FEDERAL FUNDING

STEP 7

Enhance the role and responsibilities of the U.S. Forest Service in the Bay restoration. Target additional dollars to support technical assistance, planning and mapping for forest conservation and stream buffer restoration. (Legislative Vehicle: The Chesapeake Bay Watershed Forestry Act, S. 830)

STEP 8

Continue to pursue Congressional and Presidential support for enhanced federal funding. Persuade the country that tripling the funding for Chesapeake Bay is a sound investment in the future of the nation's most productive estuary.

During the summer of 2003, newspapers reported that a "dead zone" inhospitable to most species living in the Bay now extended 100 miles south from the Patapsco River near Baltimore to the mouth of the York River, near Hampton Roads. Just as the Bay partners were moving to develop detailed nutrient reduction strategies and new living resource-based water quality criteria, this unusually large dead zone of oxygen-deprived waters highlighted the urgency of their efforts.

WANTED:

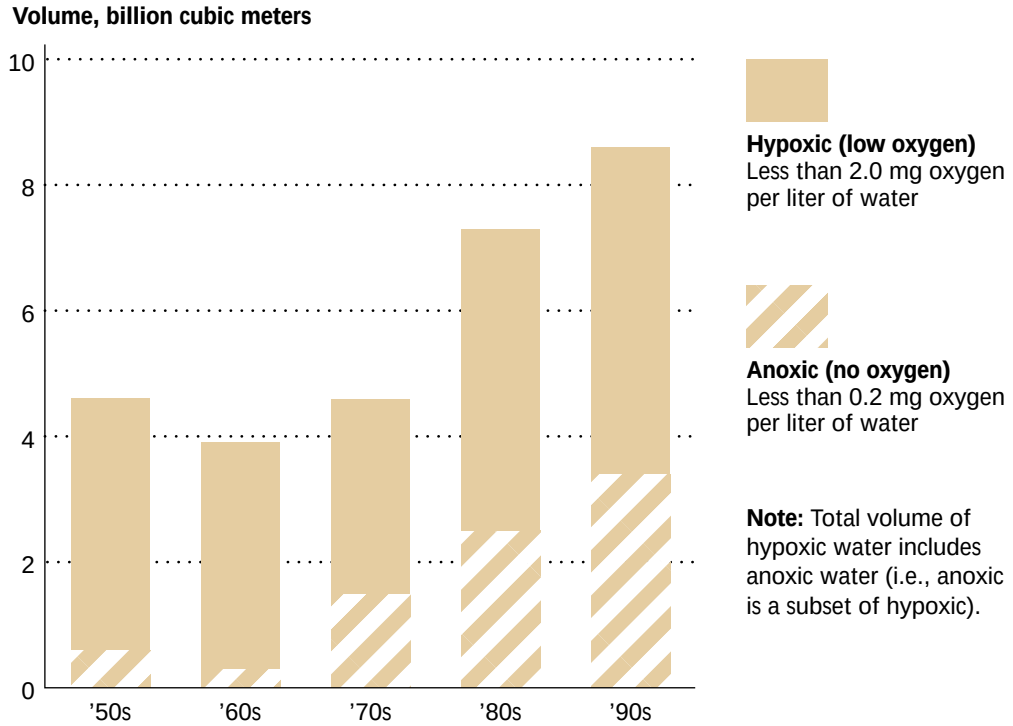
Prime living space.

Must have healthy levels of dissolved oxygen, light, nitrogen and phosphorus. Hypoxic conditions are not acceptable and limited algal population a must. Minimum requirements include abundant underwater grasses, oyster reefs, wetlands and green living shorelines. Interested tenants have a range of occupancy requirements, so a mixed-use community is essential.

Heavy rains and snowmelt had flushed more than two years of nutrients and sediments into the Bay, nutrients that had been accumulating on the land during the past two years of drought. An unusually cold winter aggravated the problem, reducing the natural mixing of cold dense bottom waters with warmer and lighter oxygen-rich surface waters, causing oxygen

IRISH CREEK, FISHING BAY, DORCHESTER COUNTY · PHOTO © DAVE HARP

Figure 1 **Oxygen-Depleted Waters of Chesapeake Bay**



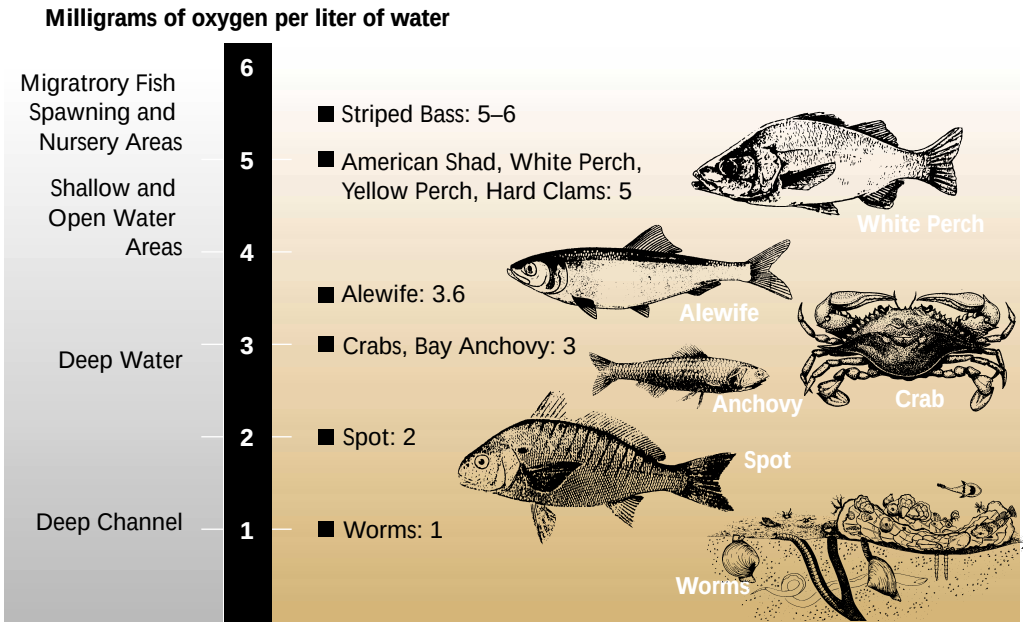
SOURCE: Hagy, Chesapeake Biological Laboratory, 2003

levels to plummet. By early July, scientists reported that the volume of oxygen-depleted-or hypoxic-waters had reached the highest levels seen in the last 20 years . Data from July 7 to 9, 2003, indicated that oxygen levels less than 5 mg/l were now prevalent in 40 percent of the water in the main stem. In fact, since the 1950s the volume of Bay water devoid of adequate oxygen levels has been steadily rising. Why do we continue to lose ground? (Figure 1)

In fact, the events of 2003 reminded us once again that the restoration of the Chesapeake Bay is inextricably linked to oxygen. The effort *is about* ensuring that there is sufficient oxygen in the water for animals to thrive. Like animals on land, nearly all of the Bay's aquatic life, from worms and crabs on the bottom, to perch and striped bass above and underwater grasses in between, rely on oxygen to survive — all in varied amounts (Figure 2).

The Bay's oxygen levels are directly tied to the presence of nutrients in the water. Too much nitrogen and phosphorus causes rapid and dense growth of algae. When massive algae populations die and decay, they consume dissolved oxygen through bacterial decomposition. Algal blooms also block sunlight from reaching underwater plants and grasses, thereby inhibiting submerged aquatic vegetation from engaging in photosynthesis. The downward spiral continues, as plants

Figure 2 **Oxygen Requirements of Bay Species**



SOURCE: Chesapeake Bay Program

cannot produce the food they need to thrive, and fail to release oxygen into the water column.

In November, the impact of the summer's oxygen-depleted waters was revealed at the Commission's quarterly meeting in Solomons, Maryland. Scientists and watermen provided Commission members with first-hand accounts of murky, sewage-laden waters devoid of fish and crabs. They reported that the prevalence of dead crabs, and the belief that many crabs retreated to hibernation mode due to these stressful conditions, may have contributed to as much as a 40 percent reduction in fishing effort during the 2003 crabbing season.

But discouragement over the summer's poor water quality was tempered by scientists' counsel that "nutrients have a short memory." Unlike some toxic pollutants, whose impacts last for years or even decades, reductions of excess nutrients can trigger a rapid response from the ecosystem. Scientists reported that meaningful reductions in nutrients, particularly those that are delivered directly to the Bay from pipes and hard surfaces, would result in discernable improvement in water quality in just a year or two.

Fortunately, the partners had already begun to ramp up their efforts to reduce the flow of nutrients into the rivers and the Bay. Earlier in April, the six watershed states and the District of Columbia agreed to develop regulatory and incentive-based programs that would more than double the reductions in nutrients achieved to date. It was a commitment fueled by the recognition that without more oxygen in the water, living creatures could not thrive.

This year, the Bay partners tackled a number of daunting questions: How do

the parts (the rivers) influence the sum (the Bay)? How much nutrient and sediment pollution can each river tolerate for its own living resources to thrive? Additionally, how much can each river contribute and still maintain oxygen-rich waters in the main stem of the Chesapeake Bay? Accurately allocating the permissible nutrient and sediment pollutant load to each of the Bay's rivers has been central to our work in 2003.

As is often the case, the science and modeling addressing these questions proved more complex than initially thought. It was not until this year that the Bay partners were ready to quantify specific load reductions for nitrogen and phosphorus (known as the "allocation loads") for each major tributary. These reductions were recommended by the Water Quality Steering Committee (WQSC) of the Bay Program, on which the Commission serves.

The WQSC was charged with answering two questions:

1. What is the appropriate Baywide loading for nutrients and sediment; and
2. How are these loadings most effectively and equitably assigned to the jurisdictions and river basins with the Bay watershed?

After considerable negotiation, on March 21, 2003, the Chesapeake Bay Commission, the Bay watershed states and the District of Columbia, with the concurrence of EPA, agreed to steep cuts in the amount of nutrients reaching the Bay and its rivers. The partners adopted a cap on nitrogen loads of 175 million pounds per year and phosphorous loads of 12.8 million pounds per year (Figure 3).

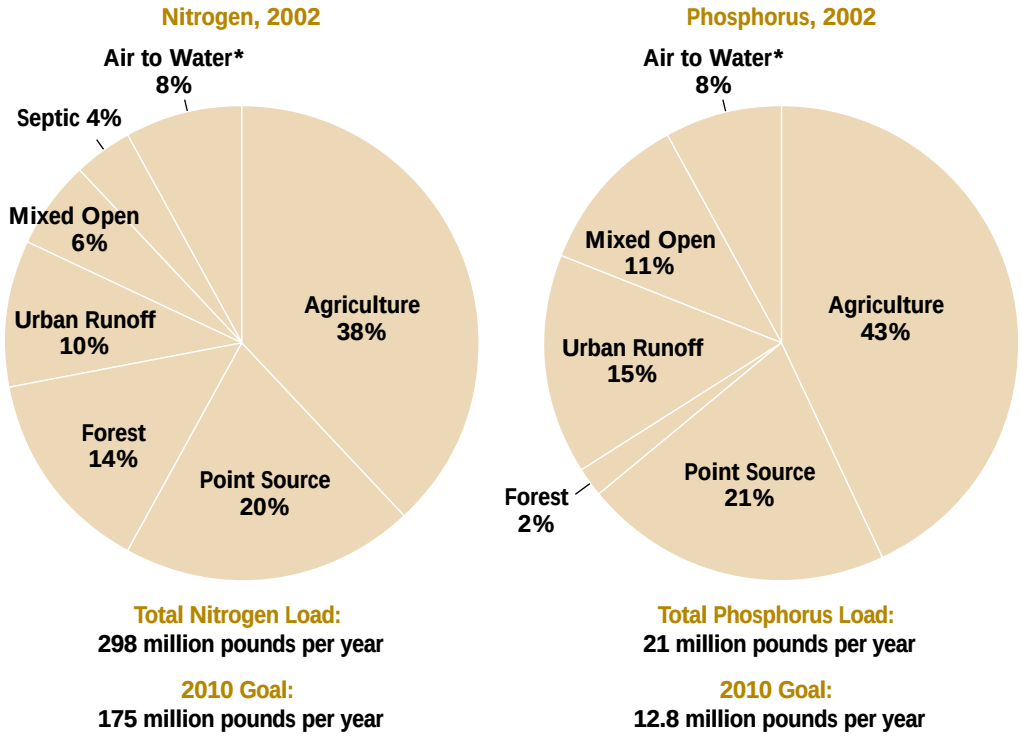
In order to maintain these caps, the Bay jurisdictions will have to achieve an annual load reduction of 110 million pounds of nitrogen and 6.3 million pounds of phosphorous by 2010. The challenges will be great. Consider that since 1985, our efforts to reduce nutrients delivered each year to the Bay have intercepted 53 million pounds of nitrogen and 8 million pounds of phosphorous. This new commitment represents a doubling of nutrients to be reduced since we began the Bay restoration in earnest 20 years ago.

Achieving these nutrient reduction goals will provide the water quality conditions necessary to support aquatic life throughout the Bay. New water quality criteria, issued in April 2003, address the three key parameters essential to a healthy Bay environment: levels of dissolved oxygen, levels of phytoplankton or algae, and water clarity. Unlike previous criteria, which were uniformly applied from the main stem to the tidal reaches regardless of depth or salinity, these new criteria differ from one region of the Bay to another, factoring in the specific water quality needs of plants and animals using widely-varied aquatic habitats.

Different sectors of the Bay are now recognized to have unique functions within the ecosystem — shallow waters for spawning, grass beds for nurseries, open water where fish and shellfish feed, and deep waters for refuge from winter cold. Thus, if rockfish need higher levels of oxygen than the current standard of 5 mg/l during the spring spawning season, the new standards can reflect those needs and call for a higher oxygen level.

Now, the partners have a year to develop water quality standards that will ensure the oxygen and clarity demands of the Bay's creatures are met, from the shallows to the depths, and through all phases of the year. Beginning in 2005, the states will begin using these standards to guide

Figure 3 **Chesapeake Bay Nutrient Loads by Source**



*NOTE: Air deposition to land is included in other categories.

the regulatory permitting process. The science supporting this effort is groundbreaking.

When implemented, the standards, complemented by a full suite of voluntary and incentive-based programs, should remove the Bay from the federal "impaired waters list." Achievement will not be easy.

In fact, clean water will be elusive with anything but the most stringent nutrient and sediment controls. Our success will be built on installing state-of-the-art nutrient controls for most municipal wastewater treatment plants, aggressive best management practices on most farms, many miles of stream buffers, more rigorous controls on sources of air emissions, cooperation by all states in the watershed, including the headwater states, and significant amounts of public and private dollars.

As our 2003 Chairman, Bob Bloxom cautioned at the Executive Council meeting, "This allocation is only the start of the journey. Unless we can identify realistic sources of considerable money, we will not accomplish our restoration goals." In 2004, building on our work in producing *The Cost of a Clean Bay,* the Commission will explore the cost-effectiveness of various pollution control options. Our challenge will be to shape the policies and funding opportunities that insure the most effective use of the region's limited resources while trying to identify new ones.■

Trees are nature's ultimate "multi-taskers," and the ecological services they provide are a critical component in our Chesapeake Bay restoration tool box. As our scientific understanding has grown, the role of trees in addressing Chesapeake Bay water quality problems has broadened, to encompass large tracts of forest in the far reaches of the watershed, buffer strips bordering farm fields and streams, as well as urban trees dotting city streets, playgrounds and shopping centers.

In each of these settings, trees are functioning to intercept rainfall and slow runoff. They act as sponges, absorbing and using nutrients that might otherwise flow into the streams and tributaries of the Bay. They counter the urbanization of our watershed, with its attendant increase in roads, driveways, parking lots, and commercial

WANTED:

Cost-effective tool for Chesapeake cleanup.

Candidates must be able to address air and water pollution and demonstrate efficiency in both stormwater and erosion control. Flexibility strongly desired: adaptable to a variety of soil and climate conditions in both urban and rural environments. User-friendly, low tech installation a must. Special consideration will be given to applicants who can provide shade, shelter, energy conservation, wildlife habitat and leisure opportunities.

NANTICOKE RIVER MEANDER - PHOTO © DAVE HARP

Table 1 **Declining Forests in the Bay Watershed**

State	% Forested	Acres	Forest Loss 1985–95 Percent	Acres
Maryland	42.9	2.5M	4%	0.1M
Pennsylvania	63.2	9.1M	—	—
Virginia	58.8	8.2M	2%	0.2M

SOURCE: Chesapeake Bay Program

and residential buildings. Heavy rains falling on these surfaces increase the volume and velocity of stormwater discharges that can scour stream banks, increase erosion and deposit substantial quantities of sediment to the aquatic environment, ultimately limiting both light and oxygen. Scientific studies show that the health and resilience of a watershed is severely compromised when impervious surfaces increase to 25 percent.

How is the Bay region doing in terms of forest retention? Statistics indicate that, while forests are extensive throughout the watershed and are the primary land cover in each of the Bay states (Table 1), they are becoming fragmented in those areas closest to the Bay and its rivers. Along riparian areas, it is estimated that 117,000 miles, or 59 percent of total stream miles, are currently protected by forest buffers. While restoration progress is well-documented, the loss of existing riparian forest buffers is far more difficult to track.

In 1996, recognizing the invaluable role of riparian forests as a line of last defense in reducing pollutant runoff and erosion, the Commission worked to establish a goal of restoring 2010 miles of riparian forest buffers by 2010. The implementation of this goal is a major success story, with the deadline met or exceeded by all three states a full eight years ahead of schedule. With an eye toward raising the bar beyond the original 2010 goal, a series of stakeholder meetings, as well as technical and policy reviews, were conducted during 2003. This work culminated in the signing of a new riparian forest buffer directive, *Expanded Riparian Forest Buffer Goals*, in December at the 2003 meeting of the Chesapeake Executive Council (EC).

Now, the Bay partners have expanded their forest buffer goal by nearly 8,000 miles to cover a distance of 10,000 miles by 2010. This equates to a rate of over 900 miles of buffers in the watershed each year for the next seven years, and is based on the most aggressive planting rate achieved to date, in the year 2002. In the long-term, the Bay partners aim to conserve and restore buffers along at least 70 percent of all streams and shorelines, translating to an additional 26,000 miles of vegetative buffers, basin-wide. Research indicates that a watershed must be 70 percent forested to remain healthy.

The directive recognizes that conserving existing riparian forests on both public and private lands is a top priority. This is because newly planted forest buffers require, on average, at least seven years before they can deliver the benefits of a fully functioning woodland. The new directive also places a high priority on monitoring forest buffers, maintaining new plantings and targeting strategic locations for restoration to maximize wildlife and water quality benefits.

The Commission also crafted language in the directive that recognizes the benefits that tree canopy cover can extend to urban settings. The timing of such an initiative could not be better. Consider that in the Washington, D.C. metropolitan area, the region has lost 64 percent of its heavy tree cover since 1973, while

TABLE 2 **The Economic Value of Trees**

City	Land Area (acres)	Average Tree Loss*	Air Pollution Control Services Lost	Increased Stormwater Runoff	Stormwater Retention Services Lost**
Charlottesville, Va.	5.3 million	8%	$218 million/yr.	19%	$466 million/yr.
Harrisburg, Pa.	7.5 million	5%	$248 million/yr.	8%	$154 million/yr.
Baltimore-Washington	1.5 million	14%	$24 million/yr.	19%	$77 million/yr.

* Time period is 1976–2000 for Charlottesville; 1973–2000 for Harrisburg; and 1973–1997 for Baltimore-Washington

** Dollar values are based on total volume of avoided stormwater runoff storage multiplied by the construction costs for building retention facilities at $2 per cubic foot. Annual values are based on cost of construction financing over the 30-year life of the facility.

SOURCE: American Forests

stormwater runoff has increased 34 percent. Cities and fast-growing counties are looking at the potential for trees to reduce the cost of constructing stormwater control devices, such as retention ponds. In a summary of several studies conducted by American Forests, it is clear that urban tree loss can have serious economic consequences (Table 2). Many of the same urban areas that are experiencing a decline in their green infrastructure are also facing loss of federal dollars due to violation of air quality regulations.

The new directive provides for urban forest inventories and adoption of local tree canopy goals in at least five urban centers in each state by 2010. It further promotes the adoption of tree canopy goals as a tool for communities in watershed planning.

What are the challenges associated with following through on this new commitment to reforest our watershed's streams, shorelines and communities? Adequate funding tops the list.

The Executive Council's directive acknowledges that the long-term restoration goal is beyond the Bay Program's current capacity. While specific cost estimates are difficult, planting 900 miles of buffers each year will cost somewhere between $4.2 million and $12.7 million per year. The range in costs is largely a factor of the riparian buffer width. While the signatory states currently require a minimum buffer of 35 feet, buffer widths of 75 to 100 feet are recommended to achieve and sustain a full array of water quality and wildlife benefits.

Partnerships will be key in the coming years, not just to buy seedlings and other necessities, but also to supply manpower and technical assistance to revegetate both deteriorating cityscapes and rural pasturelands. What is in our favor is the strong and convincing case for trees. A well-written argument for increasing urban tree canopy in the Washington, D.C. area sparked a local philanthropist to establish a $50 million endowment toward that city's "re-greening." The public's natural affinity for trees — whether in a schoolyard, a park or their own backyards — has already fostered a strong support system of non-profit organizations and community groups. By joining with state, local and federal partners, they can be tapped to harness the power of trees to clean our air and water, beautify our landscapes and refresh our souls.■

Call it geologic happenstance, call it fate. The natural forces that culminated in the formation of the Appalachian Plateau not only established whether storm flow ran to the Gulf of Mexico or to the Atlantic, they also dictated the placement of vast coal reserves in this region of the country. In the Chesapeake Bay watershed, particularly where the upper piedmont reaches into the foothills of the Appalachians, those reserves helped fuel an industrial revolution and the rise of world economic significance for the United States. Equally significant, they helped to fuel victory in two world wars. Left behind, however, was a legacy of pollution.

WANTED:

Cold, clear mountain streams, inviting to both people and fish.

Waters must be low in acidity with no presence of toxic metals or other pollutants. Waters stained orange are not eligible. Migratory fish passage blocked by the presence of acid mine drainage is unacceptable. Stream banks with shade trees and herbaceous cover a plus.

In the host watersheds that contained these vast reserves of sequestered carbon, coal was extracted in what amounts to the blink of an eye in geologic time. What remains are polluted waters that

DIRT ROAD TO WOLFPIT MARSH - PHOTO © DAVE HARP

haunt many of those basins to this day — a legacy of abandoned mine lands so vast that measurements are made in square miles rather than acres. The drainage area, greater still, includes mile after mile of rivers and streams, stained orange and polluted by acid mine runoff.

In the upper Potomac, and in multiple reaches of the Susquehanna, over 100,000 acres of abandoned mine land are unreclaimed, and over 1,300 miles of streams are damaged. The aftermath of coal production continues to impair not only water quality, but also the economic vitality and quality of life in the communities subjected to its grip. Addressing this problem has become a growing concern for the Chesapeake Bay Commission, which in 2003, made specific recommendations to Congress to more equitably fund land reclamation and restore streams damaged by historic coal mining activities.

Scientifically speaking, acid mine drainage is caused when coal and the adjoining bedrock layers containing pyrite (iron sulfide) are exposed to water and oxygen as a result of mining operations. Sulfuric acid and iron hydroxide are produced through a series of chemical and biological processes, resulting in the degradation of water quality by acidity, iron, manganese, aluminum and other metals. In addition to producing toxic effects on aquatic life, metallic sediments and coal debris can blanket the stream, smothering bottom-dwelling organisms and degrading aquatic habitat.

For many, these impacts may seem remote conceptually and geographically to the Chesapeake Bay and ongoing efforts to restore it. Yet, on closer examination, the relationship of abandoned mine lands and acid mine drainage to the Bay's health is far less remote than it first appears.

Chesapeake 2000 speaks directly to the need to protect the watershed's natural infrastructure, consisting of thousands of miles of river and stream habitat interconnecting the land, water, living resources and human communities of the Bay watershed. Certainly, our watershed planning and stream corridor restoration goals extend to those areas historically affected by coal mining. This includes some 8,000 square miles of the Bay's watershed.

So too do our living resource goals, which not only address the removal of physical blockages to migratory and resident fish passage, but likewise call for the removal of chemical blockages caused by acid mine drainage. In the West Branch of the Susquehanna River alone, over 1,200 major acid mine discharges have created chemical blockages on over 1,100 miles of stream habitat. The cost to remediate that blockage and restore fish passage far exceeds $1 billion. The total cost to reclaim the 100,000 acres of abandoned mine land and restore over 1,300 miles of stream in the Bay watershed is greater still. Of immediate concern to the Chesapeake Bay Commission is the imminent expiration (in September 2004) of a major federal funding source for these activities.

Currently, state reclamation programs rely substantially on appropriations from the Abandoned Mine Reclamation Fund (the Fund) established under the federal Surface Mining Conservation and Reclamation Act of 1977. In the recent past, annual appropriations from the Fund have been at a level of $1.5 million for Maryland and $24 million for Pennsylvania. Since its establishment, the Fund, which is based upon collection of a reclamation fee imposed on coal mined *since* 1977, has provided approximately $3.3 billion to states and Indian tribes for abandoned

mine land restoration. That work has done much to remove dangerous health and safety hazards, improve the environment, and restore sustainable communities in the coal fields of the past. Yet to complete the job, additional funding of $6 to $15 billion, and as high as $60 billion, is estimated to be needed.

Logic would dictate that Congress simply extend the authorization for collection of the reclamation fee until the job is completed, but economic and political forces have kept that from happening thus far. Not insignificant to the debate is the current structure of the program and the allocation formula used to release monies from the Fund.

As currently established, 50 percent of the fee income generated from current coal production in any one state or tribe is directed to be used to provide grants for reclamation activity in that state or tribal area. An additional 20 percent is allocated to "historic production" and is made available to states and tribes on a pro rata basis based on each entity's percentage of national historic coal production. Another 10 percent is allocated for the Rural Abandoned Mine Program administered by the U.S. Department of Agriculture and the remaining 20 percent is allocated to cover federal operations under the program.

On a national average, nearly a third (29 percent) of the total grants is based on historic production and 71 percent on the basis of income generated from current production. However, there is no relationship between funding for states in historic production areas, such as Pennsylvania, which have long been home to sites that need remediation, and areas where current production is taking place. Nearly 94 percent of the abandoned mine land problems are in the eastern United States, and much of that is in the Chesapeake Bay watershed.

In the early years of the Fund's existence, 75 percent of its income came from fees on eastern coal production, and 25 percent from the West, which was only burdened with 6 percent of the abandoned areas. But in the past 25 years, coal production, and fee income, has shifted in two significant ways. First, production has shifted west. Second, eastern production has changed from predominantly surface to predominantly deep mining, for which a reduced fee is levied. As a result: the West generates 64 percent of the fees collected and the East 36 percent, so grants under the program now go to areas of the country with very little historic production activity. Under the current allocation formula, it is estimated that it will take Maryland 15 to 20 years and Pennsylvania 60 years to complete the tasks first identified in 1977, which is readily understandable when one considers that over one-third of all coal mined in the United States before then occurred here.

In 2003, the Commission took action. Based upon discussions at its quarterly meetings as well as work behind the scenes with their Congressional colleagues, the Commission adopted a resolution that urges the U.S. Congress to reauthorize fee collections into the Fund for an additional 25 years and modify the Fund's allocation formula to better direct resources to states based upon historic production. The resolution presses Congress to continue to allow the use of Fund monies to address water quality problems, notwithstanding pressures to limit expenditures to public health and safety threats. Further, it would provide a

minimum funding guarantee to states with historic production sites regardless of current production fee generation, and demand full allocation of monies in the Fund (which currently has an unappropriated balance of over $1.5 billion).

The Commission joins a large contingent of eastern U.S. interests that are pushing Congress, as a matter of important national policy, to continue to collect fees from current coal production to fund the reclamation of historic production sites long since abandoned. Though a number of western interests have claimed regional inequity because its fee burden is being used to pay for problems in the East, the Commission takes the policy position that since the entire nation benefited from historic coal production in the East, the isolated watersheds that hosted it should not be burdened with this clean-up on their own.

At the time this Annual Report went to press, the U.S. Department of the Interior announced proposed legislation for consideration in 2004. This bill resulted largely from negotiations led by Pennsylvania over the past six months to resolve regional differences with Wyoming and other western states and to move the program forward. Major elements of the proposal of interest to Bay watershed states include the following:

- It extends the reclamation fee collection authority to September, 2018.
- It places all future fee collections into a single account, rather than individual state and tribal accounts, for distribution based on historic production. Pennsylvania's annual allocation is expected to rise from $24 million to $35 million as a result.
- It distributes the unappropriated balance in existing state-share accounts on an expedited basis, with payments spread over 10 years.
- It authorizes new regulations prescribing conditions under which the Fund could be used to promote re-mining of abandoned mine lands, thus leveraging those dollars to achieve more reclamation of both land and water.
- It provides an annual minimum funding guarantee of $2 million, which will assist states like Maryland by providing the minimum financial support needed to maintain a viable reclamation program.
- It removes the current 30 percent cap on the amount of a state's allocation that may be used for water supply restoration and protection.

The proposal has been introduced in the Senate by Pennsylvania Senator Arlen Specter and in the House by Pennsylvania Congressman John Peterson, with co-sponsorship and support from their respective chamber colleagues throughout the Bay watershed and beyond. If enacted, it represents yet another opportunity to bring additional funding to bear on restoration needs of the Chesapeake Bay watershed. It allows us to stay the course and more directly address the remnants of historic coal production in the small watersheds still burdened with its legacy.■

Delegate Robert S. Bloxom

It is ironic that as we look back on 20 years of cooperative efforts to restore the Chesapeake Bay, we must also bid farewell to Delegate Robert S. Bloxom, who has served the Commission since its inception. With his quiet determination to balance what is best for Virginia, his Eastern Shore constituents and the living resources of the Bay, this thoughtful man has made an indelible mark. Delegate Bloxom retired from the Virginia legislature and the Chesapeake Bay Commission in January, 2004. We thank him for his distinguished service, and wish him health and happiness in the years ahead.

In 1981, when Bob Bloxom was appointed to the Chesapeake Bay Commission, he was a freshman in the Virginia House of

Delegates and one of only 16 Republicans in a sea of 100 Democrats. Times have changed, and not just because his party has more seats in the legislature. "Balance was valued back then," he says. "It was felt that a young, conservative Republican like me could bring another perspective. Now the emphasis is on power politics, and that goes for both Republicans and Democrats."

Delegate Bloxom agrees that the early days of the Chesapeake Bay restoration were something of a golden age. As scientists grappled with the dynamics of an enormous ecosystem, lawmakers struggled with the first generation of legislative approaches to protecting the Bay. He points with pride to such early tri-state efforts as the phosphate detergent ban, erosion and sediment controls, and the striped bass recovery. "The more I learned about the Bay, the more I had to moderate my ideas," Bloxom recalls. "For example, at one point we were struggling to defend Virginia's watermen at all costs, and then we realized that they had to be part of the solution. That's why the Commission started the Bi-State Blue Crab Committee — to get a balanced look at the fishery." He is hopeful that a continued focus on interstate policy, based on rigorous science, will eventually bear fruit for the crab population, despite current fears.

Patience and moderation are not always seen as positive attributes in the fight to save the Bay, but Delegate Bloxom can point to specific examples that have paid off, particularly when it comes to regulation. He cites the Forestry Bad Actor Law as a case in point. "We knew we had to do something about clear-cutting near streams. We needed buffers, and when we instituted voluntary best management practices (BMPs), they were adopted right away by responsible people. But to reach those who ignored the voluntary practices, it made sense to pass a law that made them mandatory. At that point regulation worked, since the majority of people were already on board." Virginia's Agricultural Bad Actor Law had the same effect.

A perusal of the local papers suggests that Delegate Bloxom's steady hand in the legislature will be sorely missed in Accomack and Northampton counties. During his 23 years as their representative in Richmond, any one of his more than 70,000 constituents was welcome to drop by unannounced at the Bloxom Auto Supply Company in Mappsville for a word with their delegate. His constituents maintain a high level of interest in and concern about the Bay. "It's a huge influence in my area, what with all the watermen and Tangier Island right in the middle. People want to see us make progress," he adds, admitting that current financial challenges in the state do not make it any easier, and that Virginia currently spends only one percent of its budget on natural resources.

Delegate Bloxom believes that real solutions for the Bay must continue to come from the bottom up, not from the top down. "We've spent all these years getting everyone to the table, trying to figure out what's right for the Bay. And though the political picture may be different now, with consensus more difficult to achieve, we've got to keep those working partnerships alive. Our success depends on it." Bob will be sorely missed. ■

Chesapeake Bay Commission Resolution

Reauthorization of the Abandoned Mine Reclamation Fund

September 5, 2003

WHEREAS, the Abandoned Mine Reclamation Fund (Fund) established under the federal Surface Mining Control and Reclamation Act of 1977 (SMCRA) was designed to address the Nation's environmental legacy from prior coal mining activity; and

WHEREAS, prior to 1977, over one-third of all the coal mined in the United States was produced in the Chesapeake Bay Watershed, primarily in the Susquehanna and Potomac River basins; and

WHEREAS, as a result of that legacy, approximately 100,000 acres of mine lands remain abandoned and unreclaimed, and approximately 1,300 miles of streams remain impaired from acid mine drainage in the watershed; and

WHEREAS, it is projected to cost as much as $60 billion to address these problems nationwide, yet to date only $3.3 billion has been distributed from the Fund for this purpose; and

WHEREAS, abandoned mines leak acidic, alkaline, and metal-contaminated water, polluting public water supplies, destroying fish and wildlife habitat, depressing local economies, and threatening human health and safety; and

WHEREAS, there exists a $1.2 billion dollar gap in funding for living resource commitments in Chesapeake 2000, $1.1 billion of which is attributed to the removal of chemical blockage to migratory and resident fish passage in Pennsylvania waters; and

WHEREAS, abandoned mine lands represent a continuing source of the sediment load to the Bay, and the resulting acid mine drainage impairing local streams also acts as a chemical blockage to resident and migratory fish; and

WHEREAS, the Abandoned Mine Reclamation Fund, a primary source of assistance to the states in addressing this legacy, is scheduled to expire September 30, 2004; and

WHEREAS, reauthorization and certain improvements to the delivery mechanisms of the Fund are warranted to assist the Bay states in simultaneously correcting this legacy and meeting the sediment loading, habitat restoration and fish passage goals of *Chesapeake 2000*.

NOW THEREFORE, BE IT RESOLVED, that the Chesapeake Bay Commission hereby urges the Congress to act swiftly and deliberately in reauthorizing the Abandoned Mine Reclamation Fund to extend the program to at least 2029, an additional 25 years; and

BE IT FURTHER RESOLVED, that the formula for distributing state share grants under the Fund should be changed to direct resources from the Fund to states based upon historic production, rather than current production, to better address the pre-1977 abandoned mine legacy; and

BE IT FURTHER RESOLVED, that the current priorities under the Fund, particularly those related to restoration of degraded land and water resources and the environment, should be maintained; and

BE IT FURTHER RESOLVED, that states with significant reclamation problems, but which have small programs (i.e., minimum program states) should have the current $2 million minimum funding guarantee raised to $4 million to better enable them to meet their reclamation burdens in a timely fashion, and

BE IT FURTHER RESOLVED, that to better enable the states to efficiently reclaim these lands, funds allocated under the program should be "matchable" with federal, state, local, and private dollars, thus maximizing resources and encouraging partnerships; and

BE IT FURTHER RESOLVED, that to avoid the current problem of having an unappropriated balance of nearly $1.5 billion that is not being used for the intended and needed purposes of the Fund, future collections to the Fund should be fully allocated for purposes of cleaning up abandoned mine problems and reducing the time necessary to meet the goals of SMCRA and *Chesapeake 2000;* and

BE IT FURTHER RESOLVED, that a copy of this resolution be transmitted to the appropriate committees and sub-committees of Congress, and to the Chesapeake Bay congressional delegation.

Quarterly Meeting Agendas

ANNAPOLIS, MD

January 2 & 3, 2003

THURSDAY, JANUARY 2

Call to Order

Roll Call

Adoption of Minutes

Adoption/Modification of Agenda

Welcoming Remarks
Honorable Michael E. Busch
Speaker of the House

Chairman's Welcome and Updates
- New Staff Introductions
- Non-indigenous Aquatic Species Task Force

CBC C2K Fiscal Analysis Report
Release of the Commission's analysis of the costs of c2k, review of activities since the last meeting, and discussion of next steps and options for putting this information to its best possible use.
Chairman Russ Fairchild
Ann Swanson

Chesapeake Futures Report
A look at three potential scenarios for the Bay in 2020, as developed by members of the Bay Program's Scientific and Technical Advisory Committee (STAC).
Dr. Donald Boesch, *UMCES*
Dr. Jack Greer, *UMD Sea Grant*

A National Park for the Bay Region?
A Report from the National Park Service's Gateways Program
Jonathan Doherty, *NPS Chesapeake Bay Program Liaison*

FRIDAY, JANUARY 3

Breakfast Delegation Meetings

Legislative 2003 General Assembly Sessions
VA: Delegate Robert S. Bloxom
Senator Bill Bolling
MD: Delegate John F. Wood, Jr.
Senator J. Lowell Stoltzfus
PA: Representative Russ Fairchild
Senator Noah W. Wenger

Restoring Water Quality — The C2K Goals for Nutrients and Sediments
- Defining Restored Bay Water Quality: The Criteria & Uses
- Allocating Reduction Responsibilities
- Preparing for Implementation: Refining the Tributary Strategies
- Promulgating State Water Quality Standards
- Where Will the Funding Come From?

Future Policy Questions
Rebecca Hanmer, *Director, EPA Chesapeake Bay Program*
Rich Batuik, *Associate Director for Science, EPA*
Bob Koroncai, *Nutrient & Sediment Allocation Coordinator, EPA*

Election of the 2003 Commission Officers

Outgoing Chairman's Remarks
Representative Russ Fairchild (Pa.)

Incoming 2003 Chairman's Remarks
Delegate Robert Bloxom (Va.)

New Business

WASHINGTON, D.C.

May 8 & 9, 2003

THURSDAY, MAY 8

The Commission will meet in Washington, D.C., with Congressional members from the Chesapeake Bay watershed region.

FRIDAY, MAY 9TH

Breakfast Delegation Meetings

Call to Order

Roll Call

Adoption of Minutes

Adoption/Modification of Agenda

Chairman's Update

- Status: *Crassostrea ariakensis*
- Progress: Bi-State Blue Crab Advisory Committee
- June Executive Council Meeting
- Federal/State Income Analysis
- CBC FY 2003-2004 Budget

Reports From the General Assemblies: Legislation and FY 2004 Budget Impacts

MD: Delegate John F. Wood, Jr.
PA: Representative Russ Fairchild
VA: Delegate Robert S. Bloxom

Understanding the Water Quality Commitments of C2K

- Nutrient and Sediment Loading Goals
  175 million lbs/year nitrogen
  13.8 million lbs/year phosphorus
- Linking SAV to Sediment
- Integrating Allocations into the Tributary Strategy Process
  Melanie Davenport, *Virginia Director*

Meeting the Nutrient Commitments of C2K

Stakeholder Reaction

- What implementation issues have been identified?
- What intended/unintended consequences can be predicted?
- How can the burden be equitably distributed?
- What creative funding options are possible?
- What legislative initiatives are needed?

Clyde Wilber, P.E., *Greeley and Hanson, Consultant to VAMWA and MAMWA*
Roy Hoagland, *Virginia Office Director, Chesapeake Bay Foundation*

State Insights

Maryland, Pennsylvania and Virginia Cabinet Members

Commission Discussion

New Business

HERSHEY, PENNSYLVANIA

September 4 & 5, 2003

THURSDAY, SEPTEMBER 4

Chairman's Orientation and Introduction of New Member and Staff

FIELD TRIP

EN ROUTE ORIENTATIONS:

Abandoned Mine Lands: Implications for Fish Passage and Water Quality Goals

Thomas Beauduy, *Pennsylvania Director*

Congressional Initiatives for Reclamation Funding

Andrew McElwaine, *Pennsylvania Environmental Council*

STOP 1: Donaldson Abandoned Mine Reclamation Site

Putting Abandoned Mine Reclamation Fund Dollars to Work

Paul Linnan, *PA Bureau of Abandoned Mine Reclamation*

STOP 2: Gilberton Power Co. Cogeneration Facility

Utilizing Innovative Technology to Capture Wasted Energy and Improve the Environment

John Rich, *President*
Robert Hoppe, *Project Manager*

FRIDAY, SEPTEMBER 5

Breakfast Delegation Meetings

Announcements by Commission Members

2004 Meeting Schedule and Locations

Chairman's Update

- Funding Gap Update
- Cost Effectiveness Analysis
- Bi-state Blue Crab Advisory Committee
- Funders' Network

The Future of the Asian Oyster in the Bay

- Where do we go From Here? Addressing Scientific Needs and Regulatory Concerns
  Melanie Davenport, *Virginia Director*
- Findings of the National Academy of Science Study
  Susan Roberts, *Study Director National Academy of Science*
  Nancy Targett, *University of Delaware, National Academy Board*

- Vision and Strategy for the Introduction of *C. ariakensis*
  Maryland: W. Pete Jensen, *Deputy Secretary, Department of Natural Resources*
  Virginia: Russ Baxter, *Assistant Secretary of Natural Resources*
- Forging a Cooperative Process to Move Forward
  Mike Fritz, *Living Resources Coordinator, Chesapeake Bay Program*

Capitalizing on the Capitol: How can the Commission Build on Relationships in Washington?

A brainstorm session among Commission members and staff to examine progress and identify next steps and enhanced Commission member roles

New Business

SOLOMONS, MARYLAND

November 13 & 14, 2003

THURSDAY, NOVEMBER 13

Welcome

Rear Adm. Stephen A. Turcotte, *Commander, Navy Region Mid-Atlantic*

En-route Orientation

Senator Bernie Fowler
Delegate John F. Wood, Jr.

The Nexus Between Conservation and DOD Lands

A bus tour of the Patuxent River Naval Air Station's Conservation Initiatives
Kyle E. Rambo, *Natural and Cultural Resources Manager, Patuxent River Naval Air Station*

Welcome: A Pilot's View of the Chesapeake Bay

Capt. Dane Swanson

Call to Order

Roll Call

Adoption of Minutes

Approval of Agenda

Chairman's Update

- Abandoned Mine Lands Reclamation Fund
- December **9, 2003** Chesapeake Executive Council Meeting

Factoring the Weather

The combined aftermath of Isabel, a record wet year and three years of drought.
Scott Phillips, *U.S. Geological Survey*
Bruce Michael, *Maryland Department of Natural Resources*

Capturing the Nutrient Load by 2010

Part I: Current Water Quality Conditions
Walter Boynton, Ph.D., *Chesapeake Biological Laboratory*

Part II: Reaching Our Nutrient Reduction Allocations. How do we accelerate our progress while basing our decisions on science?

- Agriculture: Russ Brinsfield, Ph.D., *Center for Agro-ecology, Inc.*
- Point Sources: Cliff Randall, Ph.D., *Virginia Tech*
- Stormwater: Jim Lyons, *Casey Trees Endowment Fund*

Part III: Setting Commission Policy for the 2003 Executive Council Meeting
Secretary W. Tayloe Murphy, Jr., *Chairman, Chesapeake Bay Program Principals' Staff Committee (PSC)*
Ann Pesiri Swanson, *CBC PSC member*

Input from State Representatives

- Nutrient Reduction Initiatives
- New Riparian Forest Goals
- Urban Tree Canopy Cover

FRIDAY, NOVEMBER 14

A Breakfast With the Scientists.

An opportunity for Commission members to gain new insights into the science of the Bay restoration.
Moderator: Jack Greer, Ph.D., *Maryland Sea Grant.*

- **Nutrients:** Walt Boynton, Ph.D., *Chesapeake Biological Laboratory*
- **Nutrients & Agriculture:** Les E. Lanyan, Ph.D., *The Pennsylvania State University*
- **Oysters:** Mark Lukenbach, Ph.D., *Virginia Institute of Marine Science*

FRIDAY, NOVEMBER 14

(Cntinued)

- **SAV:** Ken Moore, Ph.D., *Virginia Institute of Marine Science*
- **Air/Toxics:** Joel Baker, Ph.D., *Chesapeake Biological Laboratory*

State Delegation Meetings

Delegation business and review of state-specific legislative opportunities.

The Blue Crab 2003: Status of the Chesapeake population and its fisheries

Delivery of the Annual Report of the CBC Blue Crab Technical Work Group (TWG)

Overview

Ann Swanson, *TWG Chair*

The Findings of the Report

Tom Miller, Ph.D., *Chesapeake Biological Laboratory*

Rom Lipcius, Ph.D., *Virginia Institute of Marine Science*

Commentary

Bob Evans, *Maryland Waterman*

Pete Nixon, *Virginia Waterman*

New Business

CHESAPEAKE BAY COMMISSION

The Chesapeake Bay Commission is a policy leader in the restoration of the Chesapeake Bay. As a tri-state legislative assembly representing Maryland, Virginia and Pennsylvania, its mission is to identify critical environmental needs, evaluate public concerns, and ensure state and federal actions to sustain the living resources of the Chesapeake Bay.

The Commission maintains offices in Maryland, Virginia and Pennsylvania. Commission staff are available to assist any member of the general assembly of any signatory state on matters pertaining to the Chesapeake Bay and the Chesapeake Bay Program.

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Cover photo: Captain's Steady Hand © David Harp

Back Cover photo: Morning Light © David Harp

ABOUT THE PHOTOGRAPHER

Dave Harp is no stranger to the outdoors. A native Marylander, he saved to acquire his first camera at the age of 12 and has been taking pictures ever since. In a photographic career that takes him from the wilds of Alaska to the reefs of Australia, the Chesapeake Bay remains Harp's favorite subject. He has produced three books on the Bay and is widely known for his support of protection and restoration initiatives.

This report was printed on recycled paper.

Chesapeake Bay Commission

Policy for the Bay

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