



Seeking Solutions

CHESAPEAKE BAY COMMISSION · ANNUAL REPORT 2001



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.

DEDICATED TO THE MEMORY OF
SEPTEMBER 11, 2001

*May courage, selflessness and resolve,
Our beacons in the darkest hours,
Continue to guide us in all our endeavors.*



DORCHESTER COUNTY, MD. · PHOTO © DAVID HARP

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EGRET FORAGES AT MARSH'S EDGE PHOTO © DAVID HARP

THE CHESAPEAKE BAY COMMISSION IS A TRI-STATE legislative commission created in 1980 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 their 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 to coordinate Bay-related policy across state lines and to develop shared solutions. The catalyst was EPA’s landmark seven-year study on the decline of the Chesapeake Bay. In the 21 years since then, the Commission 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 their colleagues in the general assemblies and executive branches to take action.

In 2001, the Commission focused on two broad missions: ensuring that the policies, regulations and laws are in place to implement *Chesapeake 2000* and, understandably, finding the funds to get the job done. The following pages provide a glimpse of the diverse activities of a unique assembly of legislators and resource policy makers. All are sustained by their vision of a clean and healthy Chesapeake Bay. All believe that productive partnerships are a fundamental step in attaining that vision.

Members and Staff of the Commission

The Hon. Brian E. Frosh, <i>Chairman</i>*	Maryland State Senate
The Hon. Russ Fairchild, <i>Vice-Chairman</i>*	Pennsylvania House of Representatives
The Hon. Robert S. Bloxom, <i>Vice-Chairman</i>*	Virginia House of Delegates
The Hon. Bill Bolling	Senate of Virginia
The Hon. Thelma Drake	Virginia House of Delegates
The Hon. Bernie Fowler	Maryland Citizen Representative
The Hon. J. Charles Fox	Secretary of Natural Resources, Maryland (August — December)
The Hon. Ronald Hamm	Secretary of Natural Resources, Virginia (November — December)
The Hon. Arthur D. Hershey	Pennsylvania House of Representatives
The Hon. David E. Hess	Secretary of Environmental Protection, Pennsylvania (March — December)
The Hon. Irvine B. Hill	Virginia Citizen Representative
The Hon. Jerrauld C. Jones	Virginia House of Delegates
The Hon. Charles A. McClenahan*	Maryland House of Delegates
The Hon. James Seif	Secretary of Environmental Protection, Pennsylvania (January — February)
The Hon. J. Lowell Stoltzfus	Maryland State Senate
The Hon. Sarah J. Taylor-Rogers, Ph.D.	Secretary of Natural Resources, Maryland (January — July)
The Hon. Richard A. Tilghman	Senate of Pennsylvania (January — July)
The Hon. Michael Waugh	Senate of Pennsylvania (December)
The Hon. Michael H. Weir	Maryland House of Delegates
The Hon. Noah W. Wenger*	Senate of Pennsylvania
The Hon. Martin E. Williams*	Senate of Virginia
The Hon. George B. Wolff	Pennsylvania Citizen Representative
The Hon. John F. Wood, Jr.	Maryland House of Delegates
The Hon. John Paul Woodley, Jr.	Secretary of Natural Resources, Virginia (January — October)
The Hon. Peter J. Zug	Pennsylvania House of Representatives

* Members of the Executive Committee

Staff

Ann Pesiri Swanson	Executive Director
Russell W. Baxter	Virginia Director
Thomas W. Beauduy	Pennsylvania Director
Patricia G. Stuntz	Maryland Director
Patsy S. Cress	Administrative Assistant



CHESAPEAKE BAY COMMISSION AND GUESTS (SEE LEGEND ON PAGE 56) • PHOTO © DAVID HARP

FOR MORE THAN TWO DECADES, THE CHESAPEAKE BAY Commission has been a legislative force in the Bay restoration. The year 2001 was no exception. Its members and staff identified Bay-related concerns requiring legislative actions in Maryland, Virginia or Pennsylvania, and looked for opportunities to better coordinate resource management programs among the states and federal government. When prospects were identified, the Commission took action.

On the heels of the signing of the Bay region's new policy agreement, *Chesapeake 2000* (C2K), the Commission devoted much of 2001 to ensuring its timely implementation. The signatories have made more than 100 commitments to guarantee the long-term health of the Bay.

With dozens of partners at the federal, state and local level sharing both the responsibility and the financial burden, the Commission focused on those commitments that require the unique analytical and consensus-building skills of its members. The issues that were selected require political leadership, present significant opportunities for enhancement and provide promise of new funding sources.

In 2001, securing this funding became a priority. The year delivered a significant financial blow with all three states reporting current and projected deficits of significant proportion. New sources of money became critical — particularly those outside of traditional funding mechanisms. Identifying federal funding opportunities for land preservation, water quality and formal education became top priorities, shared by the members’ attention to the management of the blue crab and the build-up of sediment behind the lower Susquehanna dams. A separate chapter is devoted to each of these important subjects.

While these areas received greater attention, it is the Commission’s ongoing responsibility to provide leadership on the myriad of issues that affect the health of the Bay — from the stewardship of its resources to the protection of its waters, habitats, and working landscapes. If the activity occurs within the 64,000-square-mile watershed and affects the condition of the Bay’s waters or its living resources, the Commission shares the responsibility of seeking a solution.

This chapter attempts to summarize the broad diversity of activities of the Commission in 2001. Its activities are presented according to the sections of *Chesapeake 2000* in order to provide the reader with an understanding of how the activities of the Commission support the conservation efforts of our regional partners — the states, the federal agencies, the local governments, and the citizens and businesses of the region.

The Officers

Each calendar year, the chairmanship of the Commission rotates among the states.

In 2001, Virginia turned the gavel over to Maryland with the election of Senator Brian E. Frosh (D-MD). Representative Russ Fairchild (R-PA) and Delegate Robert S. Bloxom (R-VA) served as Vice-Chairmen. In 2002, the chairmanship will rotate to Pennsylvania.

The Meetings

The Commission met four times during 2001: January 4–5 in Annapolis, Maryland; May 10–11 in Stevensville, Maryland; September 6–7 in Harrisonburg, Virginia; and November 8–9 in Williamsport, Pennsylvania. The Executive Committee of the Commission met twice to review administrative and funding matters, while state delegations met in conjunction with each quarterly meeting of the full Commission, and more frequently as state-specific issues warranted. The agendas of the quarterly meetings of the Commission are appended to this report.

Administration

The Commission maintains its headquarters in Annapolis, Maryland, with additional staff located in Richmond, Virginia, and Harrisburg, Pennsylvania.

- Each of the three member states contributed \$160,000 in 2001 in support of the operations and programs sponsored by the Commission. Pennsylvania also provided additional special funding specific to the commonwealth to support projects sponsored by the delegation.
- The Commission provided grants to the Susquehanna River Basin Commission, Maryland Sea Grant, Virginia Institute

of Marine Sciences: Virginia Commonwealth University, University of Virginia, Canaan Valley Institute, and Alliance for the Chesapeake Bay.

- An audit of the Commission’s activities conducted in FY 2001 found the operations in conformity with generally accepted accounting principles.
- The Commission continues to maintain its website at www.chesbay.state.va.us. The site contains updated information on the activities of the Commission, recent commission publications, and legislative and Chesapeake Bay Program-related links.

Legislative Activities

Of the 21 members of the Chesapeake Bay Commission, 15 are legislators serving in the general assemblies of Maryland, Virginia or Pennsylvania. Each year, either individually or as state delegations, the members work with their legislative and Congressional colleagues on Bay-related legislation. In many instances, the members play a coordinating role, ensuring that legislative initiatives mesh among the states.

- The Commission members sponsored, amended and supported legislation and budget initiatives in all three states that improve the management of water, land and living resources. The protection of seagrass and the improved management of nutrients, blue crabs, ballast water and land preservation took top priority.
- Commission staff provided briefings and drafting assistance to legislative committees. In the late spring, the staff provided briefings on the results of the 2001 legislative sessions and offered a

comprehensive summary in the *Bay Journal*. In the fall, similar presentations projected the activities of the 2002 session.

- The Chesapeake Bay Commission serves as a liaison to Congress, representing the common interests of the members’ states. This year, the Commission focused on reauthorizing and enhancing funding for the Bay region offices of EPA, NOAA, U.S. Forest Service, U.S. Army Corps of Engineers and the National Park Service. Legislative initiatives focused on attracting more than \$100 million of regional conservation enhancement funds to be provided by the Farm Bill and \$120 million in grants for advanced nitrogen removal Technologies. While the appropriations were secured, the work on the Farm Bill and nutrient reduction technologies grants is ongoing. See Chapter 3 for more information on the Commission’s work with Congress.
- In May, the Commission published a 2001 Legislative Update reporting the legislative actions of Maryland, Virginia, Pennsylvania and the federal government. An updated version is provided in Chapter 2.

Chesapeake Bay Program Management

The Commission is one of six members of the Chesapeake Bay Program’s Executive Council. As such, the members and staff are involved in all aspects of the program’s policy development and restoration activities. The Commission brings to the Bay Program an inter-jurisdictional perspective on policy issues that balances the more specific interests of the states’ executive agencies. Its broad-based nature makes it

Commissioners in the Field



A



B



C

- A** Russ Fairchild and Ann Swanson set out to examine the water quality of the Shenandoah Valley's North River.
- B** Commissioners join watermen, scientists and economists to evaluate seagrass and blue crab issues in Tangier Sound.
- C** Bernie Fowler with Chairman Brian Frosh.



D



E

- D** Irv Hill and Art Hershey discuss ways to reduce the impacts of livestock.
- E** Members don protective footgear while visiting a farm in Augusta County, Virginia.
- F** Chesapeake Bay Foundation's John Page Williams discusses the need for outdoor education with Senator Lowell Stoltzfus.
- G** Johnny Wood and Charlie McClenahan ponder the expanding poultry industry.
- H** Irv Hill, Russ Fairchild, Bill Bolling and George Wolff inspect an animal waste holding tank.



F



G



H

an excellent forum for generating discussions and building consensus on challenging regional policy issues. If an impasse exists, the Commission is often called upon to develop a meaningful solution.

- The Commission chaired a new regional effort to assess the goals and costs of implementing C2K. Nicknamed the “Lego Workgroup” because of its emphasis on identifying the “building blocks” of a successful Bay restoration, the group’s focus for 2001-2002 is to identify and secure federal funding related to water quality, land preservation and education. These efforts are summarized in Chapter 3.
- At the December meeting of the Chesapeake Executive Council (EC) in Washington, DC, Commission Chairman Frosh was instrumental in obtaining Executive Council support for the conservation provisions of the congressional Farm Bill. An EC directive addressing the management of storm water on public lands was also adopted.
- Commission staff held positions on all leadership committees within the Bay Program, contributing policy direction and budget guidance to the Program.

Water Quality Restoration and Protection

Nutrient management continues to be a major focus of the Commission’s work. The goal of reducing the Bay’s nitrogen and phosphorus by 40 percent by 2000 has not yet been met. There is now clear recognition that restoring water quality to a “clean Bay” status will require even further reductions — perhaps double, if not triple, the reductions already accomplished.

- Commission staff participated in the Water Quality Steering Committee, a Bay Program effort focused on the development of the appropriate criteria to ensure that the Bay region achieves its clean water goals. Water clarity, chlorophyll A, and dissolved oxygen standards to be applied according to shallow, mid-, and deep-water zones will serve as the measures of success.
- The Pennsylvania Delegation to the Commission cooperated with the Pennsylvania Department of Environmental Protection and the Canaan Valley Institute in co-sponsoring the second annual Natural Stream Channel Design Summit. The Summit brought together watershed organizations and watershed restoration professionals to review contemporary natural stream channel design concepts for use in watershed restoration projects in Pennsylvania, many of which are located in the Bay watershed.
- The Pennsylvania Delegation to the Commission cooperated with the Pennsylvania departments of Agriculture and Environmental Protection, along with a number of other co-sponsoring organizations, in organizing and funding the Nutrient and Sediment Control Innovative Technology Forum, to be held in February 2002. The Forum will focus on practical, energy-efficient, cost-effective solutions to nutrient and sediment control problems, primarily for local governments and the agricultural community.
- The Commission cooperated with the Pennsylvania Department of Environmental Protection in co-sponsoring a Sediment Characterization Study of the sediments behind the dams on the lower

Susquehanna River. The Susquehanna River Basin Commission, the U.S. Geological Survey, the Maryland Geological Survey, and the University of Maryland undertook the study. The study will provide baseline information for evaluating management alternatives in the future. Pennsylvania Director Tom Beauduy continues to serve as Chairman of the Susquehanna Sediment Task Force.

- The Commission continued to monitor development and implementation of the tributary strategies in each of the jurisdictions. The tributary strategies are designed to take a river-specific approach to reducing nutrients and supporting habitats necessary for the proliferation of living resources.
- Virginia Director Russ Baxter continued to serve as a member of the Department of Environmental Quality’s Water Resources Committee. The committee, which includes representatives from a broad range of organizations with interests in water quality, serves as an advisor to the Department of Environmental Quality. Baxter will also serve on the subcommittee dealing with Virginia’s implementation of the Total Maximum Daily Load requirements of the Clean Water Act.

Living Resource Protection and Restoration

While nutrient reduction and improvement in water quality are important, restoration of the Bay’s living resources — crabs, oysters, migratory fish and native waterfowl — are the clearest indicators of success. The Commission continued to work to improve habitat conditions and

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), now in its fifth year. Delegates John F. Wood, Jr. (MD) and Robert S. Bloxom (VA) co-chair the Committee. Six additional members of the Commission serve on the Commission. Ann Swanson chairs the Technical Work Group, which advises the BBCAC. A summary of the leadership role of the BBCAC appears in Chapter 5 of this report.
- Staff advised the Virginia and Maryland general assemblies and coordinated a number of panels on crab-related issues. Ann Swanson also conducted a seminar at the annual Maryland Watermen’s Annual Convention and Expo to explain the work of the BBCAC and consider the industry’s concerns.
- Throughout 2001, the Commission coordinated its work on the blue crab with the NOAA-funded Chesapeake Bay Stock Assessment Committee (CBSAC). The Commission worked to ensure that Congress double its funding of CBSAC and the NOAA Bay Program Office overall.
- The Commission sponsored a technical charrette in Solomons, Maryland, to address key research needs associated with effort management in the blue crab fishery. Members of the Technical Work Group of the Commission’s BBCAC met to investigate the potential application of pot tagging and other gear marking systems in the Chesapeake Bay, as well

as to assess the biological and management implications of an expanding soft crab/peeler fishery in the Bay. A report will be issued early in 2002.

- The Commission sponsored two “Watermen-Scientists Dialogues” that brought blue crab scientists and local watermen together to share their insight and knowledge of the crab and its fishery on Tangier and Smith islands. It is hoped that these informal dialogues will continue in other locales as a means of building stronger partnerships and improved communication among stakeholders. A more complete description of the dialogues and the charrette is offered in Chapter 5.
- The introduction of exotic species continues to be a concern of the Commission. Commission staff advised both the Maryland and Virginia general assemblies and the U.S. Congress on legislative initiatives intended to reduce the threat of non-native species introduction from the ballast water discharge of ships.
- Maryland Director Pat Stuntz participated in a special briefing on Chesapeake Bay environmental issues for Maryland Lt. Governor Kathleen Kennedy Townsend, with emphasis on blue crab issues.

Vital Habitat Protection and Restoration

The flowing rivers, meandering creeks and hidden coves of the Chesapeake Bay watershed contain the habitats needed for the nourishment and propagation of the Bay’s prolific living resources. Wetlands, forests, sea grass beds, bottom reefs and tidal pools each contribute to the web of

life that defines the regions’ productivity. It is the ongoing challenge of the Commission to ensure that these and other vital habitats are protected and restored in order to sustain the Bay’s creatures and enrich the lives of its people.

- The Commission continued its partnership with the Chesapeake Bay Program, U.S. Forest Service, Abell Foundation and Environmental Law Institute to improve management of our contiguous forests and riparian buffers as sustainable resource lands. In 2001, we began the cooperative planning of three legislative forums that would examine the legal changes needed to promote forest conservation programs in the states.
- The Commission continued to serve as a supporting organization for the Virginia Oyster Heritage Program. The program is an effort by the Virginia Coastal Resources Management Program and the Virginia Marine Resources Commission to reestablish native oyster populations in the Chesapeake Bay through the use of constructed sanctuary oyster reefs.
- In 2001, the Commission actively monitored the Virginia Institute of Marine Sciences’ (VIMS) investigations of *Crassostrea ariakensis*, an exotic species of oyster native to Asian waters. In 1995, the CBC Virginia members sponsored a legislative resolution calling upon VIMS to study the viability of growing non-native oysters in the Chesapeake Bay. Because the trials of *C. ariakensis* proved successful, the CBC will petition the National Academy of Sciences to conduct a review in 2002 of the benefits and risks of its introduction.

Sound Land Use

There is an undeniable link between the health of the waters of the Chesapeake Bay and our stewardship of its watershed. The land-to-water ratio 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. Thus, land-use decisions may well be the most important factor in the success or failure of our efforts to restore and protect the Chesapeake Bay. These decisions are also among the most politically charged and difficult issues to resolve.

- In February 2001, the Commission and The Trust for Public Land (TPL) jointly issued *Keeping Our Commitment: Preserving Land in the Chesapeake Watershed*, examining the C2K challenge of preserving 20 percent of the land in the watershed by 2010. Press conferences were held in all three jurisdictions, followed by speaking engagements aimed at amplifying the report’s recommendations.
- At the request of the Commission on the Future of Virginia’s Environment, staff worked with TPL, the Division of Legislative Services and conservation organizations to develop a set of policy options to advance land conservation in Virginia. Chaired by CBC member Senator Bill Bolling, the Commission is expected to introduce a progressive package of initiatives at the start of the 2002 legislative session. The establishment of a dedicated fund for land preservation is among its top priorities.

- In Pennsylvania, work is underway to develop a constitutional amendment to allow a tax credit for forestland retention. The constitutional amendment would have to be adopted in two successive General Assembly sessions and then put before the voters for approval before enabling legislation could be enacted authorizing such credits.

- In Maryland, the members worked to safeguard funding for Program Open Space and the Maryland Green Print Program. With these programs intact, Maryland should achieve its preservation goals by 2010.

- Commission staff participated on a panel convened by the Urban Land Institute (ULI) to examine “smart growth” solutions for the Washington metropolitan region. The work with ULI is ongoing.
- Commission staff participated in a series of meetings with local land trusts to develop financial and legislative strategies for expanded land preservation efforts. Based on a ten-year track record, the non-governmental organizations were asked to shoulder the burden of 28.5 percent of the land preservation goal, equaling 314,000 acres. An agreement is to be signed early in 2002.

Individual Responsibility and Community Engagement

There is an immeasurable benefit derived from individual and community-led efforts to improve water quality and protect the living resources of the Bay’s many sub-watersheds. The Commission has long served as an advocate of local

initiatives by establishing funding sources, offering technical and political expertise, and encouraging environmental education curricula in the region's schools.

- The Commission provided political support to U.S. Senator Paul Sarbanes (D-MD) his successful petition of Congress to increase support for the Small Watersheds Grants Program. The grants support community-led restoration and protection projects throughout the watershed.
- Through its membership on the Community Watershed Task Force, the Commission continued to promote the involvement of watershed organizations and local governments in the activities of the Chesapeake Bay Program. The Task Force issued its report in the spring of 2001.
- The Commission staff worked with Senator Sarbanes' office to secure a NOAA appropriation of \$1.2 million for environmental education for the Bay. The money is intended to support the C2K commitment to provide meaningful outdoor experiences to every student graduating in the watershed, beginning with the class of 2005.
- Ann Swanson authored the lead article for the 2001 issue of *Intercoast*, the preeminent international journal of coastal management. The issue was devoted to success stories in coastal management; the article summarized the lessons learned in two decades of restoration management.

- The Pennsylvania Delegation to the Commission co-sponsored the annual Susquehanna Sojourn. In 2001, the weeklong Sojourn involved over 140 canoeists who traveled from Renova to Sunbury on the West Branch of the Susquehanna River.
- Commission staff participated in the selection of sites for inclusion in the National Park Service's Gateways Network and assisted in the selection of "Gateways and Watertrails" grant recipients. The Gateways Working Group is also evaluating the potential for a Chesapeake Bay National Park designation.
- The Pennsylvania Delegation to the Commission provided funding to support the Susquehanna Greenway Partnership. The Partnership is working to establish a green belt along the full length of the river corridor.
- The Commission co-sponsored a workshop with environmental and land preservation organizations to stimulate private foundation funding. Restoration, land protection and dedication were the focus because of the reliance on community and student involvement.

The challenge of restoring the Bay must be viewed in its entirety, with no single project addressed in isolation of the others. All are connected. All have influence upon each other. The Commission continually works to integrate these efforts in order to enhance their cumulative effect.

Hail and Farewell

Senator Richard A. Tilghman

Senator Richard A. Tilghman resigned from the Pennsylvania Senate in August 2001; therefore, he can no longer serve on the Chesapeake Bay Commission. After 14 years of service, we bid farewell to a dedicated member of the Pennsylvania Delegation with an abiding connection to the Chesapeake Bay.

Senator Tilghman's family is one of the oldest on Maryland's Eastern Shore, and he has fond memories of childhood summers spent on the Chester River. "There were so many crabs and so many rockfish, we were on the river all the time. When I was eight or nine years old, we'd sail with skipjack captains to Baltimore with bushels of tomatoes all over the decks. We'd sleep on the boats and come back the next day, ready for the next adventure."

Tilghman has been one of the Bay's most ardent protectors, and from the start promoted Pennsylvania's equal participation on the Chesapeake Bay Commission. "The Susquehanna supplies 50 percent of the Bay's fresh water, and it was clear to us that we had to do our part," Tilghman recalls. "Pennsylvanians have always enjoyed their connection to the Chesapeake, and many people don't realize that north of Baltimore, the majority of the registered boats are from Pennsylvania."

As Chairman of the Senate Appropriations Committee, Senator Tilghman was instrumental in building a sustained program in Pennsylvania to restore the Chesapeake Bay. He secured financing for the Chesapeake Bay Pollution Abatement Program as well as increased state funding for the county conservation districts. "Dick has always had a keen interest in the Chesapeake Bay," says Senator Noah Wenger. "He recognized that you can't do much of anything without money." Representative Art Hershey adds, "Senator Tilghman is really committed. He made sure that the Bay was a focus for Pennsylvania. Whoever comes after him has big shoes to fill."



Senator Tilghman believes that population growth and the build-up of sediment behind hydroelectric dams on the Susquehanna are among the most pressing issues confronting the Bay. "In many ways we're reaping what we've sowed," Tilghman says. "Though much of the build-up of sediment is natural, it's also coming out of old coal mines, agricultural fields and other activities that have destabilized the river banks. It's an enormous issue and we're very concerned about it in Pennsylvania."

Notwithstanding the array of challenges facing the Bay, Senator Tilghman believes it's also important to applaud the victories. And for him, the most remarkable achievement is the rebounding of the rockfish, one of the great success stories in fisheries restoration. "We can't underestimate the importance of this achievement," Tilghman says. "We need to remind ourselves that there are steps we can take that really do help us make progress, but these decisions take guts." In the complex business of restoring the Chesapeake Bay, that is important to remember.

Thank you, Senator Tilghman. Your efforts will continue to inspire us.



NANTICOKE RIVER NEAR ELLICOTT ISLAND • PHOTO © DAVID HARP

EACH YEAR, THE GENERAL ASSEMBLIES OF THE STATES convene to enact new laws. Our members are among them. In Annapolis, Richmond and Harrisburg, they draft and support the legislation necessary to achieve the Commission's goals. Creating effective policy comes naturally to this group, many of whom serve in leadership positions on the committees responsible for making key environmental and natural resource decisions.

In 2001, the Commission worked to put in place the policy infrastructure at both the state and federal level to achieve the goals of *Chesapeake 2000*, by securing financial support and crafting legislation to further our progress. The environmental initiatives championed by the Commission's state delegations during the 2001 legislative sessions are highlighted in this chapter, grouped according to the four areas of concern at the heart of *Chesapeake 2000*: resource protection, habitat protection, water quality protection and sound land use.

Our work with Congress to craft complementary federal policy is the subject of Chapter 3.

Living Resource Protection and Restoration



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

Crabs

Both Maryland and Virginia responded to the recommendations of the Commission's Bi-State Blue Crab Advisory Committee (BBCAC) in April of this year. In 2000, armed with scientific consensus regarding the alarming declines in the blue crab population, BBCAC recommended a doubling of the adult spawning stock in the Bay, which translates to an approximate 15 percent reduction in fishing effort over the next three years.

This year, members of the Chesapeake Bay Commission's Maryland Delegation introduced recreational crabbing legislation to complement new commercial regulations proposed by the Department of Natural Resources (DNR). The final conference report resulted in the establishment of new catch and gear restrictions on the recreational fishery.

- Persons catching up to two dozen hard crabs and one dozen peelers or soft crabs do not require a license.
- With the purchase of a \$5 individual license or a \$15 boat license, recreational crabbers may take up to one bushel of hard crabs and two dozen soft crabs or peelers per person.
- Allowable gear includes up to 30 collapsible traps/net rings and a trotline up to 1,200 feet.

- The per-boat limit is one bushel of hard crabs and two dozen peelers or soft crabs, or a maximum of two bushels with two or more licensed crabbers on board.

These new restrictions will serve to reduce the recreational catch in order to help meet the 15 percent reduction goal, while simultaneously providing much needed data about the size and scope of the recreational crab fishery. License fees will be used for enforcement, blue crab research, and for a recreational crabbing survey. (SB 14/HB 772)

Commission member Delegate Michael H. Weir sponsored legislation authorizing DNR to require each commercial crab licensee to declare a Sunday or a Monday as a day off for the license year. DNR has proposed regulations establishing the commercial crabbing day off provision in the bill. (HB 1021)

In response to the recommendations of BBCAC, Delegate Robert S. Bloxom, co-chair of the BBCAC, successfully sponsored a bill to grant the Virginia Marine Resources Commission (VMRC) the ability to limit the catch of recreational crabbers. Previously, unlicensed individuals could take as much as one bushel of hard crabs and two dozen peeler crabs per day for personal use. VMRC may now limit, by regulation, the catch of unlicensed crabbers. VMRC is expected to exercise this new authority in 2002. (HB 2032)

Lastly, legislation authorizing the Maryland Department of Natural Resources to adopt regulations limiting or prohibiting the importation, use, catching or possession of non-native crab species was unanimously approved. (HB 319)

Oysters

In Virginia, a new program, if funded (no funds were provided in the 2001 fiscal year), will provide grants of up to \$300 for individuals who grow oysters for transfer to state oyster sanctuaries. A bill created the Oyster Growing Activities Fund from which the grants will be made when the bill is funded. The Virginia Marine Resources Commission will administer the program. (HB 2493)

The Maryland General Assembly addressed oyster aquaculture by requiring the Department of Natural Resources to adopt regulations addressing the methods used when collecting oyster spat in the waters of the state. (HB 921)

Invasive Species

Modeled after a bill passed in Maryland in 2000, the Virginia General Assembly adopted legislation to improve its knowledge of ship ballast water discharge and exchange activities. While Maryland's statute includes reporting requirements for domestic traffic, Virginia's law is limited to ships originating from foreign ports. This bill will provide Virginia with important information about the source and quantity of ballast water discharged as the commonwealth seeks to protect its waters from the potential invasion of foreign organisms. In November 2001, VMRC adopted the necessary regulations to implement the law. (HB 1072)

The voracious consumption of submerged aquatic vegetation by a burgeoning non-native mute swan population prompted the Maryland General Assembly to approve a measure requiring DNR to establish a program to control mute swan populations, including the managed harvest of adult males. (HB 728)

Fish Passage

Based on a previously approved capital budget bill, Pennsylvania Governor Tom Ridge approved \$4.2 million for the design and construction of fish passage facilities at an inflatable dam at Sunbury, Pennsylvania. The dam is located on the Susquehanna River, immediately downstream of the confluence of the West Branch and North Branch of the river. The design phase, anticipated to take 18 months, is intended to be operational for the American shad migration in spring 2004. The fish passage at Sunbury will open up 580 miles of additional spawning habitat for the shad, which historically had migrated as far north as Cooperstown, New York, on the North Branch of the river, and Chest Creek, Pennsylvania, on the West Branch.

Vital Habitat Protection and Restoration



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

Wetlands

Several bills were introduced to amend Virginia's nontidal wetlands program, created by legislation in the 2000 session. Only one bill survived, however, which changed the effective date of the law from no later than October 1, 2001, to August 1, 2001. (SB 1272; HB 2292)

Submerged Aquatic Vegetation

As a result of an ongoing study of issues related to the restoration of submerged aquatic vegetation by the Chesapeake Bay Commission, the Virginia General Assem-

bly adopted a resolution, proposed by Commission member Delegate Thelma Drake, to develop a shallow water management plan for the Chesapeake Bay and its tidal tributaries. It will address the increasing conflicts between the natural resource goals of restoring underwater grasses, the economic uses of shallow water and riparian areas and the impact of adjacent land uses on shallow waters. In consultation with Chesapeake Bay Commission staff, VIMS is developing sophisticated geographic-based models to evaluate suitable uses of shallow areas and identify any potential conflicts. An interim report will be provided by VIMS in January 2002, with a final plan and report expected by the end of 2002. (HJ 765)

In recent years, there has been illegal use of hydraulic dredges by fishermen who transit Virginia waters. Because these dredges can cause severe damage to sea grass beds, the General Assembly adopted a bill that enhances the authority of VMRC to enforce its prohibition on the use of this gear. It is now illegal to possess or use a hydraulic dredge in Virginia waters unless a permit is obtained from VMRC. Transporting dredges in Virginia waters for the purposes of maintenance, repair or off-loading catches made in federal waters are exempt from permitting requirements. (HB 2417)

In Maryland, legislation was proposed to offer further protection of underwater grasses by authorizing DNR to prohibit the use of crab scrapes in specified areas. The increasing use of heavy equipment in vulnerable underwater grass beds prompted this legislative action. Although unanimously approved in the House, the bill failed to reach final vote in the Senate. (HB 679)

A Chesapeake Bay Commission-sponsored measure first introduced in 2000 was approved by the Senate, but failed to come up for a vote in the House Environmental Matters Committee. This bill would have improved existing law by requiring that SAV protection areas be updated every three years, instead of annually, giving areas where grasses have disappeared time to return. The bill would have improved the process for prohibiting other types of clam harvesting equipment in SAV Protection Zones. (SB 172; HB 100)

Watersheds

The General Fund Budget adopted by the Pennsylvania General Assembly and approved by the governor includes an appropriation of \$51.9 million to the Department of Environmental Protection (DEP) for watershed protection and restoration projects, including those related to riparian buffers, acid mine drainage, abandoned mine reclamation, wetlands restoration, watershed assessments and education. This appropriation represents continued funding for the Growing Greener Initiative. Projects funded to date have or will result in the following: creation or restoration of 4,261 acres of wetlands; completion of 188 miles of stream buffers; 171 miles of stream improvement projects; reclamation of 4,402 acres of abandoned mine lands; and the plugging of 1,242 abandoned oil and gas wells.

From the Maryland Delegation Chairman



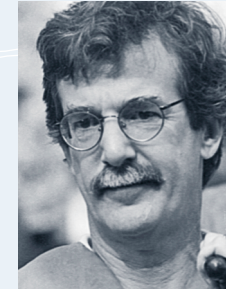
Capitalizing on our striking diversity in background, political vantage and geography, the seven members of the Maryland Delegation garnered widespread support for several important legislative initiatives this session.

Delegate John Wood, Jr., serves as Chairman of the House Commerce and Government Matters Committee. From southern Maryland, Delegate Wood has applied his knowledge of the crab industry to his co-chairmanship of the Bi-State Blue Crab Advisory Committee (BBCAC). In 2001, Delegate Wood worked with fellow BBCAC members, Delegates Charles McClenahan and Michael Weir, to encourage the General Assembly to support a 15 percent reduction in blue crab harvest over the next three years. Our delegation was successful in enacting a non-commercial crabbing license to better control and understand the size of the recreational catch.

Both Delegate McClenahan and Senator Lowell Stoltzfus represent large areas of Maryland's lower Eastern Shore. The region provides the lifeblood of Maryland's commercial blue crab fishery. As such, they are continually striving for the balance that will protect the crab and sustain its diverse fisheries.

Delegate McClenahan, the 2001 Vice-Chairman of the Maryland Delegation, championed legislation to improve the removal of abandoned boats from the Bay's waterways. He also continues to press for solutions to the problem of erosion of the Bay's barrier islands.

Senator Stoltzfus provides a balance to my own urban vantage. He has tilled the land of his Somerset County farm for more than 25 years, was among the first to place his farm in a permanent conservation easement, and has planted over 140,000 trees on his property. Senator Stoltzfus



**Senator
Brian E. Frosh**

provides us with valuable insight into the practical approaches needed to engage farmers in conservation activities.

Delegate Weir, a native of Baltimore, is an avid hunter who brings a lifelong love of the outdoors to our deliberations. His commitment to protecting habitat for the state's native wild species has been evident this year in his support of legislation to strengthen land preservation, to protect sea grass beds, and to control the expanding non-native mute swan population.

Delegate Weir serves as Vice-Chair of the

House Environmental Matters Committee.

Former senator Bernie Fowler is our citizen representative. A lifelong environmental advocate and former commercial watermen, he is well known for his love of the Patuxent River. Senator Fowler can always be counted on to be a strong voice for water quality improvements and is largely responsible for Maryland's pursuit of advanced wastewater treatment throughout the state.

Department of Natural Resources Secretary Chuck Fox replaced outgoing Secretary Sarah Taylor-Rogers in the summer of 2001 as the gubernatorial representative. Prior to becoming Secretary, Fox served as EPA's Deputy for Water, a position that put him in charge of the nation's water quality.

In closing, I had the pleasure to serve as Chairman of the Commission in 2001, as well as Chair of the Environment Subcommittee for the Senate Education, Health and Environmental Affairs Committee. Protection of the environment continues to be among my highest priorities. As a long-time resident of suburban Washington, DC, it is impossible for me to ignore the manifold problems caused by sprawl. I believe that smart growth and revitalization of our cities are critical to preserving Maryland's natural landscapes.

**Water Quality Protection
and Restoration**

**CHESAPEAKE 2000
GOAL** *Achieve and maintain the
water quality necessary to
support the aquatic living
resources of the Bay and its
tributaries and to protect human health.*

Chapter 2 **Wastewater Treatment**

Leaks from aging systems and overflows from combined sewage systems discharged millions of gallons of raw sewage into Maryland tributaries during the spring and summer of 2000. Recognizing this major source of nutrient pollution, Maryland Commission members Senators Brian E. Frosh and J. Lowell Stoltzfus introduced legislation that would have established a task force on upgrading sewerage systems throughout the Bay watershed. In order to address this issue in the most timely manner, Governor Parris Glendening issued Executive Order No. 3 to immediately establish the task force and charge it with assessing the costs and priorities for sewerage system upgrades and addressing the water quality impacts of combined sewer overflows. A final report was submitted in January 2002. (SB 174; HB 12)

Related legislation, which successfully passed the Maryland General Assembly, will improve the reporting requirements for sewer overflow or treatment plant bypass by establishing requirements for both public and agency notification. This legislation was successfully shepherded by Senator Frosh and several of his colleagues. (SB 418)

Pennsylvania also addressed the issues of aging and inadequate sewer and stormwater collection systems. Joint Legislative Conservation Committee hear-

ings were conducted on the issue of combined sewer overflows (CSOs), and specifically on a bill that would call for a \$1 billion bond referendum to provide grant assistance to local communities to address CSO problems. (SB 150)

In February 2001, the Joint Legislative Air and Water Pollution Control and Conservation Committee of Pennsylvania issued its Report on Water Quality Credits and Trading. The committee report contains a series of recommendations supporting creation of a watershed-based pollutant credit trading system. It calls on DEP to establish a pilot trading program under prescribed guidelines and with stakeholder involvement. The committee report supports the 2000 recommendations of the Chesapeake Bay Program's Nutrient Trading Team to implement nutrient trading guidance. The CBC was a member of that team. (HR 361 of 2000)

In an effort to more comprehensively address the issue of manure disposal, Commission member Senator Noah W. Wenger was successful in introducing legislation that creates the Agricultural By-Product Management Technology Board in the Pennsylvania Department of Agriculture. The board will evaluate economically and environmentally feasible digesters and by-product management technologies, as well as specific regional by-product reduction needs, and make recommendations to the Secretary of Agriculture. The Department is directed to develop programs to promote education, use and development of digesters and by-product management technologies, and a related grant and loan program. (SB 549, Act No. 32)

Legislation was adopted in the Pennsylvania House that would establish a water resources management program in the

From the Pennsylvania Delegation Chairman

Russ Fairchild

The year 2001 was an important one for the Commission's Pennsylvania Delegation, a dedicated team that has worked to promote agricultural preservation and water quality initiatives in the commonwealth.

Senator Noah Wenger and George Wolff have served on the Commission since Pennsylvania first joined in 1985. Senator Wenger has championed the contribution that the farm community can make to clean water when it has solid program support. Pennsylvania now leads the country in acres of farmland preserved, thanks in large measure to Senator Wenger's sponsorship of the legislation that created Pennsylvania's farmland preservation program. Senator Wenger served as Vice-chairman of the Pennsylvania Delegation in 2001.

George Wolff serves as Pennsylvania's citizen representative, a position he has held since 1985. Mr. Wolff is a recognized leader in the agricultural community and brings a practiced understanding of farming and a keen interest in innovative technology to the work of the Commission. He has provided significant leadership on issues like nutrient management, seed and feed formulation, and carbon sequestration.

Senator Richard Tilghman, who retired from the Senate in August 2001, served as a member of the Commission for 14 years. He is a passionate supporter of the Bay and Pennsylvania's involvement in its restoration. As chairman of the Senate Appropriations Committee, he was instrumental in providing sustained funding to support Pennsylvania's efforts. Replacing Tilghman in 2002 will be Senator Michael Waugh from York County, who served on the Commission previously as a member of the House of Representatives.

Among my colleagues in the House are Peter Zug and Arthur Hershey. Representative Zug's interests, including



**Representative
Russ Fairchild**

forestry and agriculture, closely match his Lebanon County legislative district. He also has a strong interest in environmental education and Pennsylvania's stream signage program.

Representative Hershey is a 10th-generation farmer from Chester County who currently serves as Chairman of the House Environmental Resources and Energy Committee, a position he has used to provide leadership on a number of Bay-related issues, from the highly successful Growing Greener program to comprehensive water management legislation.

Secretary David E. Hess of the Pennsylvania Department of Environmental Protection serves as the gubernatorial appointee to the Commission. He brings considerable environmental policy experience both from his tenure at the department and his prior work as the Executive Director of the Pennsylvania Senate's Environmental Resources and Energy Committee. He replaces James Seif, who had served as Secretary since 1995.

My own legislative district sits in the heart of the Susquehanna River Valley, in Snyder and Union Counties. With the river such a defining resource in my district, I have pulled together a Susquehanna Legislative Caucus in the General Assembly to serve as an advocate for river conservation. Forestry and the conservation of forestlands have been a focus among my conservation efforts since these lands dominate over 60 percent of the total land area in the Susquehanna portion of the Bay watershed.

The commonwealth shares no shore frontage on the Chesapeake Bay and yet it plays a defining role in determining the Bay's health, contributing more than half of the estuary's fresh water through the Susquehanna and Potomac watersheds. Clean water is good for our mighty rivers and good for the great Chesapeake Bay.

Chapter 2

Department of Environmental Protection. The bill establishes a permit program for public water supply withdrawals over 10,000 gallons per day and for all other water withdrawals over 100,000 gallons per day. Additionally, it calls for an update of the state water plan, identification of water conservation areas, the establishment of regional and statewide water advisory committees and drought response planning. (HB 539)

Governor Schweiker introduced legislation in December as an outgrowth of the 15 Water Forums conducted throughout the commonwealth by the Department of Environmental Protection in 2001. The Administration proposal requires: an update of the state water plan with information on water availability, water use and future demands on a watershed basis; identification of Critical Water Planning Areas; regional water resource planning; and, water conservation. (SB1230; HB2230) Legislative hearings on the various water resource legislative proposals are anticipated in early 2002.

Chemical Contaminants

Reporting of pollution incidents will be improved in Virginia by a bill adopted by the Virginia General Assembly that expands reporting requirements to any person responsible for an unpermitted discharge or likely discharge of “industrial wastes...or any noxious or deleterious substance into state waters.” Previously, based on a court ruling, only permit holders were required to report. (HB 2601)

In April of 2000, an underground pipeline associated with the Chalk Point Generating Station leaked more than 120,000 gallons of oil into Maryland’s

Patuxent River. In response to this event, hazardous liquid pipeline safety requirements were improved and clarified in a bill that received unanimous approval by the Maryland General Assembly. The Public Service Commission is now authorized to act for the U.S. Secretary of Transportation to implement federal laws relating to intrastate transportation of hazardous liquids by pipeline. (SB 117)

Legislation was adopted in the Pennsylvania House that would phase out the use of methyl tertiary butyl ether (MTBE) as a gasoline fuel additive over a period of four years. Support for the legislation grew out of concern for groundwater contamination caused by spills of MTBE, notwithstanding its use in increasing octane levels and reducing carbon monoxide and ozone levels. (HB 1918)

Dredged Material Management

The Maryland General Assembly passed legislation prohibiting open-water dumping of dredged material in the Chesapeake Bay, allowing exceptions only when projects involve the beneficial use of spoils. The legislation establishes an Executive Committee to provide oversight in the development of a long-range dredged material management plan for Maryland. The committee will review and recommend to the governor long-term dredged material with priorities given to beneficial use and innovative reuse of dredged material. Recommendations are due on or before December 31, 2002. (SB 830; HB 1317)

From the Virginia Delegation Chairman

Robert S. Bloxom



**Delegate
Robert S. Bloxom**

In many ways, the Virginia Delegation reflects the broad diversity of the commonwealth’s portion of the Chesapeake Bay watershed. Listening to each other’s concerns helps us to recommend evenhanded approaches to restoring our waterways.

Delegate Thelma Drake, appointed in 2000, represents portions of two of Virginia’s largest cities, Norfolk and Virginia Beach. Thousands of Delegate Drake’s constituents live within sight of the Bay or one of its tributaries, and so the range of activities permitted at or near the shore is a natural concern to her.

Senator Bill Bolling, a Commission member since 1996 and the 2001 Vice-Chair of the Virginia Delegation, represents a district that includes portions of three of Virginia’s major tributaries — the Rappahannock, York and James — stretching from fast-growing Hanover County, near Richmond, to the classic Tidewater landscapes of Middlesex County. As chair of the Commission on the Future of Virginia’s Environment, Senator Bolling focused on identifying the costs of implementing C2K and advancing important measures to protect open space.

The home of shipbuilding giants and boat yards, large and small, the “Peninsula” district of Senator Marty Williams is steeped in maritime history. The north side of Hampton Roads has seen history and commerce pass its shore. As Senator Williams likes to say, his district is at the “end of the pipe” of the Chesapeake Bay watershed. This geographic fact compels Senator Williams to look for ways to improve water quality and land management upstream and in his own district.

Delegate Jerrauld Jones represents the most urban constituency among the Virginia Delegation. He sees the Bay restoration from the perspective of a jurisdiction that is


undergoing redevelopment and revitalization. Norfolk is re-emerging as a vital urban center, while continuing to appreciate its historical role as home of the world’s largest naval base and a center of ocean commerce. The region is also grappling with environmental restoration of the Elizabeth River, which remains degraded from centuries of industrial use.

Irvine Hill, the Delegation’s citizen representative, brings a long career in public service to the Commission, both as a former mayor in his native Norfolk and as a Vice-President of Cox Communications, a company that has been generous and creative in its exploration of Chesapeake Bay issues. A resident of Hampton Roads, Mr. Hill has brought national attention to the work of the Chesapeake Bay Commission.

Both John Paul Woodley (January–October) and Ronald Hamm (November–December) served as representatives of Governor James Gilmore’s administration as Secretary of Natural Resources. Former Delegate W. Tayloe Murphy, Jr., a 20-year veteran of the Commission, will succeed them under Governor Mark Warner’s administration in 2002.

I am proud to say that I am one of the original members of the Chesapeake Bay Commission, having served since 1980. My district spans the entire Eastern Shore and into corners of Tidewater Virginia. Home to some of the most pristine waters in Virginia, it also supports some of the most intensive types of agriculture, including poultry. The enduring island communities of Tangier and Saxis are among my constituents. We struggle mightily to find a balance between the need for economic growth and the conservation of the natural resources that support our way of life. I believe that finding this balance is the secret to restoring the Chesapeake Bay.

Sound Land Use

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

Chapter 2

Land Conservation

A number of bills that would have expanded land preservation efforts failed in the Virginia General Assembly. Once again, a bill that would dedicate a portion of the existing state recordation tax to the Virginia Land Conservation Foundation was unsuccessful, as was the Park and Recreation Bond Act of 2001, which would have, among other things, acquired land for the preservation of natural areas. (HB 1879; HB 2390)

A bill in Virginia renamed the Agricultural Vitality Program within the Department of Agriculture as the Office of Farmland Preservation. The bill details the powers of the office, which include developing model policies and practices for use by local governments in the development of purchase of development rights (PDR) programs. The office can also now develop criteria for certifying that local PDR programs are eligible to receive grants, loans and other public funds and develop ways of allocating these funds to localities to purchase agricultural conservation easements. (SB 1160)

In Maryland, a new land preservation program aimed at protecting a network of the state's most valuable remaining ecological lands was approved and funded at \$35 million for FY 2002. The purpose of Maryland's "GreenPrint" program is to

identify the most important unprotected natural lands in the state, link or connect these lands through a system of corridors or connectors, and save those lands through targeted acquisitions and easements. It is estimated that the state's green infrastructure contains roughly 2 million acres of undeveloped land, of which three-quarters are currently unprotected. (HB 1379)

Another important land preservation measure approved by the Maryland General Assembly gives an individual state income tax credit in exchange for the donation of a perpetual easement in land to the Maryland Environmental Trust or the Maryland Agricultural Land Preservation Foundation. (SB 459; HB 681)

The approved General Fund Budget for FY02 for Pennsylvania includes important appropriations for land conservation, including a combined total of \$35 million in state and federal funds for conservation and open space acquisitions, and \$20.6 million in state funds for farmland preservation easements.

Amending Pennsylvania's Agricultural Area Security, Representatives Arthur Hershey and Peter Zug successfully co-sponsored legislation to increase opportunities for enrolling acreage in the farmland preservation program. The revisions will help to ensure that land enrolled in federal conservation programs is eligible and that preserved land can subsequently be enrolled into such programs without violating the provisions of the conservation easement. (HB 101, Act No. 14)

Development, Redevelopment and Revitalization

Responding to recent court rulings that were seen to weaken one of Maryland's keystone land use laws — the Chesapeake

Bay Critical Area Protection Program — Commission member Delegate Weir and colleagues introduced bills that would have clarified the original intent of the law and clearly defined the conditions under which a variance could be granted. Although the Senate legislation was approved, the House measure was not brought up for a vote in the Environmental Matters Committee. Members of the Maryland Delegation will reintroduce the measure in 2002. (SB 607; HB 661)

Two component parts of the Governor's 4-year-old "Smart Growth" campaign to curb sprawl development were approved. An Office of Smart Growth will be established in the Maryland Executive Branch to oversee urban sprawl-related activities, and a Community Legacy Program will be established in the Department of Housing and Urban Development. (SB 204; SB 202)

A bill sponsored by Senator Martin E. Williams that would expand the jurisdiction of the Chesapeake Bay Preservation Act in Virginia to apply to all the land within Virginia's Chesapeake Bay watershed was defeated in a Senate committee. The Act would have required the incorporation of regulations to protect water quality into local land use codes. Currently, only counties and cities that are adjacent to the Bay or to a tidal portion of any of its tributaries must comply.

The Virginia legislature did adopt a resolution that directs the Joint Legislative Audit and Review Commission to study a number of issues relating to implementation of the Chesapeake Bay Preservation Act, including local compliance, the granting of exceptions and variances and the funding and personnel needs for full implementation and enforcement. (SB 801; HJ 622)

The Commission on the Future of Virginia's Environment continued to examine the adequacy of Virginia's erosion, sediment and stormwater control laws. While no firm conclusions were reached over the course of 2001, the Commission will continue to evaluate these laws and will likely offer recommendations in advance of the 2003 session of the General Assembly.

The General Fund Budget for FY02 as adopted by Pennsylvania General Assembly and signed by the governor includes an appropriation of \$4.6 million for continuation and expansion of the Growing Smarter Initiative. The money will allow for further strengthening of planning capability at the county and municipal level through technical assistance and land-use planning grants, strengthen interagency communication and coordination, and develop an electronic clearinghouse for land-use resources.

Legislation for the Bay



PHOTO © DAVID HARP

Chesapeake 2000 (C2K) CONTAINS NEARLY 100 commitments. Many are date specific. All urge the Bay restoration partners to far exceed their accomplishments of the past. Underlying the daunting task of crafting new policy and technical strategies to boost progress is one fundamental question: *How do we find the money?*

Initial estimates of the funding needed to implement just the water quality and land preservation commitments of C2K were developed by the Chesapeake Bay Foundation (CBF) and presented at the Commission's May meeting. With an initial price tag of approximately \$8.5 billion, the Commission partnered with CBF and the Bay Program to fine-tune these estimates and search for cost-effective solutions. Federal funding, with the identification of the necessary state cost share, would be the focus of the group.

Since its first meeting in July 2001, the "Lego Workgroup," chaired by the Commission, has been working to provide the necessary answers. The broad regional representation on the group, supported

by EPA's technical expertise and CBF policy staff, raises the potential for success.

Lego is not an acronym; it is named for the children's blocks. Just as legos can be arranged in multiple combinations to create an object, so too can a mix of technical approaches be combined to meet specific C2K goals. The Lego Workgroup members understand that differing approaches among the states are wholly appropriate, so long as the necessary goals are met. It promotes this flexibility and seeks to systematically identify a broad range of potential options.

The members also recognize that competition for federal funding is fierce. In the late 1970s, there were few regional estuarine programs to compete with the Bay region's proposals. Now, nearly one-third of the roughly 100 estuaries in the U.S. compete for an ever-shrinking source of funds.

In order to define a manageable workload, *Lego: Phase I* (2001-2002) is focusing on three areas: water quality, land preservation and formal education. The Lego Workgroup is identifying approaches that "push the envelope" by (1) identifying new initiatives to advance conservation, nationwide; (2) changing existing funding allocation formulas to advance the use of conservation practices in our region; and, (3) proposing pilot programs to demonstrate innovative new conservation practices — techniques that could, in time, be applied elsewhere in the nation.

Emphasis has been put on innovation since it is the key to maintaining the Bay region's competitive edge. Commission Chairman Senator Brian E. Frosh explains it this way: "Ordinary proposals attract ordinary funding while extraordinary proposals attract extra federal funding."

Water Quality

With the goal of correcting all nutrient and sediment-related problems by 2010, and the revised cost estimates topping \$10 billion, water quality was a logical first focal point of the Lego effort. In 2001, water quality monitoring data from the Bay's largest tributaries revealed no discernable trends in nutrient loads, despite modeling results showing a 15 percent reduction in the amount of nitrogen entering the Chesapeake Bay from 1985–2000. New analyses showed that a doubling, if not tripling, of current nutrient control efforts is needed to reach the C2K goals. Roughly translated, restoring a "clean Bay" will require reducing an additional 120 million pounds of nitrogen in the next decade, above and beyond the nearly 50 million pound reduction achieved over the past two decades. Clearly, business as usual will not work.

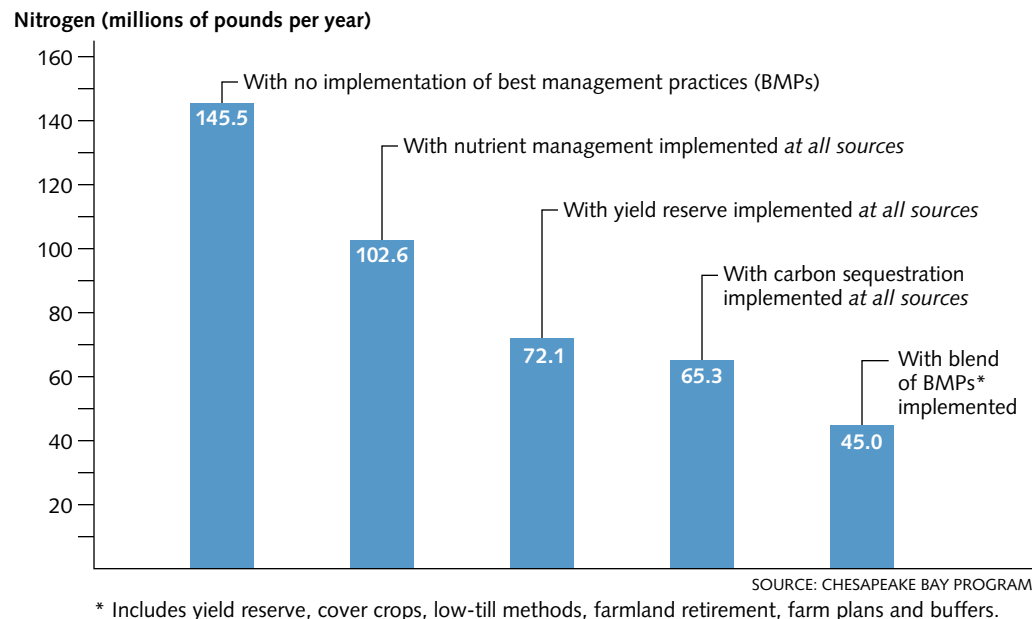
Reducing Agricultural Runoff

At its first meeting, the Lego Workgroup focused on agricultural sources of pollution due to pending reauthorization of the federal Farm Bill. By fall, the Farm Bill debates were underway in both houses of Congress and Lego members focused on the inclusion of conservation provisions that would most benefit the Bay.

The Farm Bill poses enormous opportunities for new funding. The House-adopted version authorizes roughly \$50 million in new conservation funding for the Bay region, representing a four-fold increase above current funding levels. Proposals considered by the Senate expand agricultural conservation funding more than eight-fold, to \$144 million, and quadruple U.S. Forest Service funding in the region. While no final decisions were made, the Congress is expected to resume

FIGURE 1 Agricultural Nitrogen Loads

Estimated agricultural nitrogen loads delivered to the Chesapeake Bay under various modeling scenarios, showing potential effectiveness of agricultural management practices.



its deliberations in 2002, during the second session of the 107th Congress.

For its analyses, the Bay Program's modeling staff conducted 40 model runs that tested 15 agricultural best management practices, four urban, two point-source, and 19 combinations of nutrient reduction options. Staff then determined the suite of best management practices most effective in reducing the nitrogen loads. (See Figure 1)

Based on the group's analyses, and coordination with key Congressional staff, recommendations were proposed that were endorsed by the Commission and forwarded to the Congress. The Commission then worked to galvanize the support of the leaders in the region. The debate over the Conservation Title in both Senate and House versions included many of the Lego-generated proposals.

Lego analyses revealed that the practices currently being applied to farm fields remain appropriate; however, only 35 percent of the Bay's agricultural lands are currently under nutrient management. Achievement of our goals requires implementation on virtually all farmland in the watershed. To encourage additional enrollment, monies were sought for technical assistance and incentive payments through enhancements to the Environmental Quality Incentive and the Conservation Reserve Enhancement Programs (EQUIP and CREP).

In two cases, new pilot programs were proposed for the Bay region. A five-year Cover Crop Program for the Chesapeake Bay watershed and Mississippi River basin would provide federal funding to allow timely planting of cover crops to reduce runoff. The Lego group also proposed

creation of a Bay region pilot Nutrient Reduction Program for demonstrating the concept of yield reserve.

The Yield Reserve Program would pay farmers to reduce the use of fertilizer on cornfields, and would provide insurance to offset yield reductions that occur in some years. Research has shown that crops are relatively inefficient nutrient users at high yield levels. Thus, reducing nutrient applications by 10–15 percent may result in little to no reduction in yield. The water quality-related benefits of such policies are dramatic: a presentation to the workgroup by Dr. Donald Boesch of the University of Maryland revealed that a 12 percent reduction in fertilizer use resulted in a 33 percent reduction in nitrate flux in the Mississippi River basin.

The Lego group also addressed carbon sequestration. The use of warm season grasses are beneficial in that they sequester increased levels of carbon in the soil for the long term, and can be directly converted to energy through combustion in bio-energy facilities. These “low impact cropping systems” result in far less nutrient and sediment losses than current corn-wheat-soybean rotations. A pilot program has been proposed for the Chesapeake Bay watershed to demonstrate these concepts.

Agreement between the House and Senate was not reached by the end of the year; thus, the Commission will be working to ensure that these proposals are included in the 2002 debate.

Reducing Stormwater Runoff

Urban land use makes up only 9 percent of the watershed, yet it contributes disproportionately 14 percent of the nitrogen and 15 percent of the phosphorous entering the Bay. Even more significant, its

contribution is on the rise — projected population growth will result in a doubling of urban land use by 2020.

As land is paved for highways, parking lots and suburbs, the natural filtering capability of the land is reduced. This reduced infiltration diminishes groundwater recharge, increases water temperature and increases the velocity of runoff, allowing for pollutants to be carried directly to the Bay’s rivers and streams.

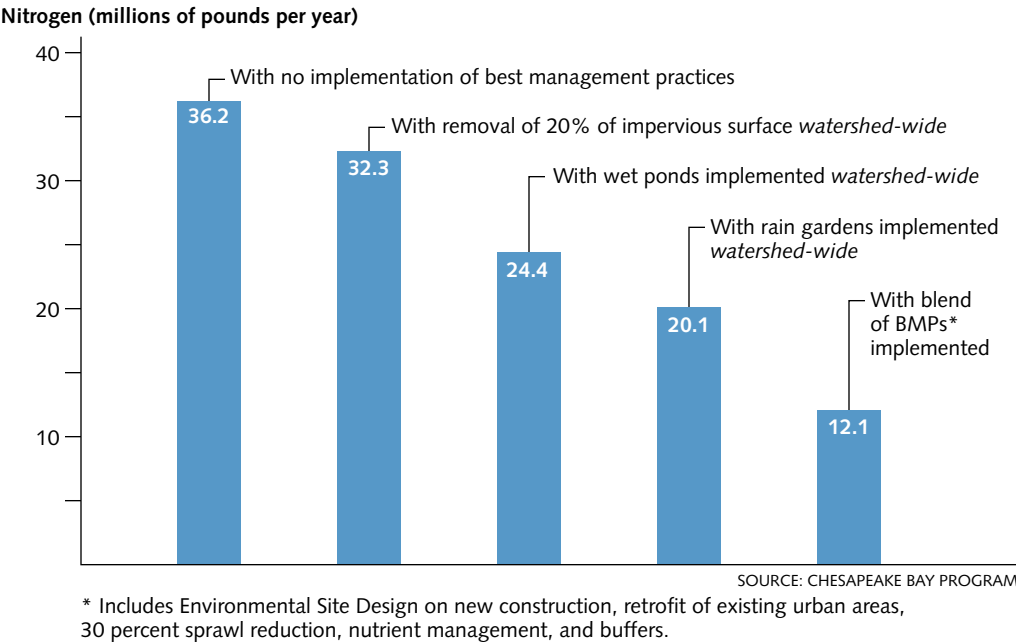
There are some 1,570 stream miles within the Bay watershed classified as impaired. Fortunately, some innovative approaches to urban land management exist to mitigate this trend. The Lego Workgroup has analyzed opportunities associated with low impact development, use of natural filtration techniques such as rain gardens to capture stormwater near residences and highways, and other measures to reduce impervious surfaces. The potential gains are striking, e.g., rain gardens have been shown to achieve pollutant removal efficiencies of 80 percent for sediment, 70 percent for phosphorous, and 43 percent for nitrogen (Figure 2).

Models confirm that a multi-pronged approach is essential. Existing structural controls, such as wet ponds and other stormwater retention structures, need to be inspected and maintained. Construction and development practices should conform to environmental requirements that reduce sediment and nutrient runoff. As progress is made in establishing new riparian forest buffers, existing buffers need to be protected.

Perhaps the greatest challenge lies in shaping our future pattern of land use. Our propensity for larger lots and homes fuels the sprawl that is converting natural lands to impervious surfaces at an alarm-

FIGURE 2 Urban Nitrogen Loads

Estimated urban nitrogen loads delivered to the Chesapeake Bay under various modeling scenarios, showing potential effectiveness of urban management practices.



ing rate. Analyses show that low impact development designs offer both economic and environmental benefits.

With 670,000 acres of roadways and parking lots in the Chesapeake watershed, comprising one-half to two-thirds of the area’s total impervious surfaces, new transportation approaches that incorporate both low impact development and innovative stormwater management techniques must take center stage. Yet funding these programs has never been easy. The reauthorization of the Surface Transportation Bill, slated for 2003, may provide an outstanding chance. The Lego Workgroup will be analyzing our prospects in 2002.

Future Work

Finding funding for the water quality recommendations and conducting similar

analyses for the C2K goals for education and land preservation will be the focus of work in 2002. Preliminary estimates suggest that, Baywide, \$30 million per year will be needed for education, while \$1.8 billion will purchase the easements and land needed to reach our preservation goals. In each case, the Lego Workgroup will attempt to methodically match need with emerging federal opportunity. Where a mechanism does not exist, an attempt will be made to create one.

The word Lego comes from the Danish words “LEeg GOdt” — meaning “plays together well.” The challenge has never been clearer: if our vision of a healthy and vibrant Bay is to be realized, the leadership of the region must unite to advocate expanded federal funding for new and innovative conservation programs.



CONOWINGO DAM - PHOTO © DAVE HARP

THINK ENERGY. WHEN YOU THINK ABOUT SEDIMENT, think about energy. And do so in the context of water, flowing water.

Whether it is runoff resulting from a heavy spring rain, the acceleration of stream flow as it pushes downstream, or the raging release below hydroelectric turbines, the ability of water to dislodge sediment and carry it down through the system is a function of its energy — the faster the water moves, the more sediment it can carry.

Whether it takes weeks, or decades, or even centuries for a dislodged particle to travel from a seemingly remote headwater area to the estuary, its journey is dictated by this natural force. Similarly, in seeking solutions for the reduction of sediment loadings to the Bay, recognition of this basic premise must dominate not only our thought process, but our management strategies as well.

For the last several decades, the Chesapeake Bay restoration effort has been focused on attaining a level of water quality necessary to sustain the Bay's living resources. And while sediments have always

been a concern, nutrients, for good reason, have taken center stage. Now, a series of actions has resulted in sediment receiving near equal billing.

In the year preceding adoption of *Chesapeake 2000*, EPA listed vast portions of the Bay and its tidal rivers as “impaired waters” under its authority in the Clean Water Act. Nutrients and sediment were identified as primary causes of the impairment and an agreement was reached to give the Bay Program partners until 2010 to achieve water quality sufficient to remove the Bay from the impaired waters list. Success will avoid the application of regulatory mechanisms (TMDL) under Section 303(d) of the Clean Water Act. The result of this agreement was the inclusion of three key sediment reduction commitments in *Chesapeake 2000*:

1. By 2001, determine the sediment load reductions necessary to achieve the water quality conditions that protect aquatic living resources, and assign load reductions for sediment to each major tributary.
2. By 2002, complete a public process to develop and begin implementation of revised Tributary Strategies to achieve and maintain the assigned loading goals.
3. By 2003, work with the Susquehanna River Basin Commission and others to adopt and begin implementing strategies that prevent the loss of the sediment retention capabilities of the lower Susquehanna River dams.

The third action was a direct follow-up to a Chesapeake Bay Commission–sponsored initiative undertaken the previous year to address the gradual loss of sediment storage capacity behind the large

hydroelectric dams on the lower reaches of the Susquehanna River. The loss of that capacity creates the probability of a significant increase in sediment loads moving over the dams and on to the Bay.

The Pennsylvania Delegation to the Commission provided grant funding in 1999 to the Susquehanna River Basin Commission (SRBC) to organize a multi-agency Sediment Task Force to review the technical aspects of the issue and make management recommendations. Tom Beauduy, Pennsylvania Director of the Chesapeake Bay Commission, serves as chair.

The Sediment Task Force has been gathering information about sediment loads in the basin for the last three years, including data about their sources and the implications of that load on both the lower Susquehanna reservoir capacity and the Bay. They have reviewed the effectiveness of various sediment control practices and recommended options to resolve the impending lost storage capacity.

With no surprise, earlier studies released by the U.S. Geological Survey (USGS) and the SRBC determined that the dams have acted as sediment and nutrient traps for nearly a century. So, ironically, while they have posed significant problems to migratory fish, they have functioned as de facto best management practices (BMPs), reducing sediment and nutrient pollutant loads that would have otherwise reached the Bay. As of 1990, the total amount of sediment trapped by the dams was estimated at 259 million tons. USGS estimated that the dams had an average trapping efficiency of 70 percent for sediments.

What was a surprise had to do with time. As the dams reach their maximum sediment storage capacity, the sediment

transported by the river’s flow will simply pass undiminished downstream. Of the three major dams on the lower Susquehanna, two (Holtwood and Safe Harbor) are now considered to be at steady state and the most downstream facility, Conowingo, is projected to reach this capacity in 20 to 30 years.

Thus, Conowingo stands as the last viable sediment trap before the river joins the Bay at Havre de Grace, Maryland. The remaining storage capacity at Conowingo is estimated to be 43 million tons.

The data reveal that annual sediment loads were once as high as nine million tons per year during the height of the logging and mining eras. For the past two decades, they have remained stable at approximately 3.1 million tons. Due to the dams, the net delivered load to the Bay is slightly less than one million tons. Because phosphorus chemically bonds to soil particles, phosphorus loads have also been substantially reduced — by an estimated 40 percent.

When the river’s flow increases to more than 400,000 cubic feet per second (cfs), the energy becomes sufficient to scour the bottom, moving the stored sediment up and over the dams. Over the past century, there have been 14 major flow events surging at this level. Hurricane Eloise in 1975 scoured five million tons of sediment from behind the dams. The ice jam flood in 1996 resulted in nine million tons of scour. Topping the list was Hurricane Agnes in 1972, which scoured 17 million tons of sediment from storage and sent it on to the Bay. Given their influence, the ability to predict catastrophic storm events and related scouring will affect the accuracy of any determination of how long the dams will hold back sediment.

In order to understand the potential impact the loss of storage capacity would have on the Bay itself, the Task Force turned to the Chesapeake Bay Program’s Scientific and Technical Advisory Committee (STAC). STAC noted that in shallower water, notably the Upper Bay, wind currents causing suspension and re-deposition are the major influence on sediment impacts. In the Middle Bay, tidal currents and the resulting shoreline erosion is key. In the Lower Bay, salinity currents influenced by the ocean are a dominating force, suspending and re-suspending the sediment.

With regard to Susquehanna sediments, the STAC concluded that nearly the entire delivered load stays resident in the Upper Bay, north of the Chesapeake Bay Bridge. Less than 5 percent of the load is transported down to the Middle Bay, and only during high flow events.

STAC also found that increased sediment would exacerbate current impacts on underwater grasses due to decreased light penetration. Increased impacts on macro-invertebrates and on eggs, larvae and juvenile fishes are likely. The increased need to dredge the navigational channels in the Upper Bay and the resultant threat to spawning and nursery habitats may, in fact, be the most significant problem if sediment storage capacity is lost in the lower Susquehanna.

To address these problems, the Task Force developed a series of recommendations for reservoir, riverine and upland management options in the basin.

First, a feasibility study was recommended to determine if dredging the reservoirs is a viable option to maintain or reduce the volume of sediment currently trapped behind the dams. Other alternatives were considered, but dismissed.

In anticipation of this feasibility study and with funding support provided by the Chesapeake Bay Commission and the commonwealth of Pennsylvania, the SRBC also began a study in cooperation with USGS, Maryland Geological Survey and the University of Maryland to characterize the sediment stored behind the dams. The study, intended to determine the physical, biological and chemical composition, will help to establish if the accumulated sediment can be put to beneficial use if removal proves to be viable. A final report is anticipated in 2002.

Regardless of whether dredging to extend the life of sediment storage capacity is undertaken, the Task Force also concluded that reducing sediment loading throughout the basin is critical. It proffered a series of recommendations for upland and riverine management, designed to improve best management practices along the rivers and in the basin in order to reduce the sediment flow.

Upland recommendations address agricultural, forest, mining and urban lands as well as transportation systems. To date, most best management practices have focused on nutrient pollution, particularly those on agricultural lands. BMPs will have to be expanded to address both nutrients and sediments, and existing practices must be evaluated to determine their effectiveness in controlling both. For urban lands, recommendations are made for promoting innovative, environmentally-sensitive site design measures, ground water recharge, improved water quality, stream channel protection and enhanced watershed management of stormwater and floodways.

Riverine management recommendations are focused on stream restoration

and stabilization, riparian buffers and natural and constructed wetlands. As is the case with the upland recommendations, emphasis is placed on the use of BMPs and natural systems to slow the speed of water runoff, thus limiting its erosive effects.

At a more generic level, the Task Force called for enhancement of sediment monitoring and modeling to facilitate smarter and more comprehensive management decision-making. While a certain level of monitoring data is maintained, and while the current Bay watershed model can be useful in informing management decisions, the data are at a scale too general to provide the specific policy-relevant information needed to make sound management decisions.

As the year 2001 came to a close, the partners of the Bay Program were actively completing the first of the three sediment commitments contained in *Chesapeake 2000*, namely to identify the sediment load reductions needed for each of the major tributaries. These “allocations” are anticipated in 2002. Following their release, each jurisdiction will revamp their tributary strategies to include the BMPs necessary to achieve their sediment goals.

For the Susquehanna River basin, designing an effective strategy for reducing sediment loads has added complexity and urgency because of the dam storage capacity issue. In the end it may be the hardest of all the strategies to write. Nonetheless, and due in large measure to the interest and support of the Chesapeake Bay Commission, the legwork has already begun and may serve as a model for sediment reductions in tributaries throughout the Bay watershed.

Conservationist of the Year

Ann Pesiri Swanson

The work of the Chesapeake Bay Commission was recognized this year when Executive Director Ann Pesiri Swanson was named Conservationist of the Year by the Chesapeake Bay Foundation, the largest non-profit association devoted to protecting and restoring the Bay. The annual award, established in 1980, honors an individual who has demonstrated “superlative service to the restoration and protection of the Chesapeake Bay.”

In her 14 years at the Commission, Swanson has become a respected environmental leader for her ability to forge the policies, laws and implementation strategies that power the Bay restoration. She chaired the drafting committee of the 2000 Chesapeake Bay Agreement, a task that required a practical grasp of the unique conditions under which each of the signatories pursue their commitment to the Bay.

Virginia Natural Resources Secretary and former Delegate W. Tayloe Murphy, Jr., worked closely with Swanson for 12 years as a member of the Commission. “Ann’s writing skills are legendary among legislative draftsmen in Annapolis, Harrisburg, Richmond and Washington,” he says. “They looked to her for leadership in the development of the tributary strategies, forest buffer and land preservation goals, and in defining all of *Chesapeake 2000*. I can say, unequivocally, that she has done more than any single person I know to advance the Chesapeake Bay Program.”

Swanson’s long list of environmental campaigns supports Secretary Murphy’s belief. She was instrumental in promoting the phosphate detergent ban, the Maryland Critical Areas Act, the Virginia Chesapeake Bay Preservation Act, and fish lifts on the Susquehanna, to name a few. She chairs the Technical Work Group of the Bi-State Blue Crab Advisory Committee, the team responsible for developing inter-jurisdictional management approaches for the Chesapeake blue crab.



Jack Greer of the Maryland Sea Grant College observes that Swanson is the person to whom leaders in the Bay restoration repeatedly turn to build consensus, a skill that was pivotal in the blue crab controversy this year. “It takes courage to step into the midst of an acrimonious debate among scientists, watermen, resource managers, conservationists and others,” says Greer. “It takes a special person to keep focused on the central issue at hand — in this case, the protection and restoration of the Chesapeake Bay.”

Swanson joined the Chesapeake Bay Commission in 1988, after five years as Grassroots Director of CBF, where she developed the largest public advocacy lobbying effort in the region. It was a defining chapter for Swanson, who continues to champion the contribution of local citizens. “Without Ann Swanson, CRA wouldn’t be here today,” says Andrew R. McCown, President of the Chester River Association. “She organized a conference that brought together everyone with a vested interest in a healthy river. Ann was the inspiration that convinced us that the Chester would never revive without our knowledge, commitment and teamwork.”



PHOTO © DAVE HARP

THE CHESAPEAKE BLUE CRAB IS AS TANGLED IN the Bay's history as a doubler snarled in a dip net.

Reportedly served by Chief Powhatan when Europeans arrived in the early 1600s, the blue crab has proven a staple of Chesapeake cuisine for hundreds of years and remains central to its lore. A regional delicacy right through the seventeenth and eighteenth centuries, blue crabs began regularly reaching tables in such nearby cities as New York and Philadelphia by the late 1800s.

Now, Bay blue crabs not only grace brown-papered picnic tables and clean white cloths in backyards and restaurants from Hampton to Harrisburg, but they may just as easily ride jetliners across the country and around the globe, reaching lucrative markets as far away as Japan.

Owing to its fecundity and popularity, the Chesapeake blue crab has faced enormous fishing pressure. As early as 1893, Professor W. K. Brooks predicted that increased demand would jeopardize the size of the stock, and declining harvests in the early 1900s led the U.S. Bureau of Fisheries to commission a study of the blue crab fishery. In 1916,

Virginia placed a size limit of five inches on hard crabs, and Maryland followed suit in 1917, adding as well a 3-inch limit on peelers.

Since that time, the Bay blue crab has seen some roller coaster seasons. From Baywide annual harvests that often hovered between 80 to 100 million pounds as recently as the 1980s and 1990s, catches dropped below 60 million in 1998, and lower still in 2000 and 2001.

Warned by scientists participating in its Technical Work Group, the Chesapeake Bay Commission's Bi-State Blue Crab Advisory Committee moved in 2001 to take action to preserve the blue crab stock. As a first order of business, the Commission, meeting in Annapolis in January 2001, adopted the ten-point action plan prepared by the bi-state committee.

Although tighter crabbing limits would lead to short-term pain for some in the industry, the Commission concluded that long-term benefits and the move toward a more sustainable harvest level would far outweigh the short-term costs.

"We need to reduce fishing pressure and we need the watermen to help us figure out how," said Maryland Delegate John F. Wood, Jr., who, with Delegate Robert S. Bloxom of Virginia, co-chairs the bi-state advisory committee. Both Wood and Bloxom emphasized that the seafood industry must be involved in a meaningful way as the jurisdictions set a new course for managing the blue crab. Panels of watermen and processors joined in the bi-state committee's discussions and deliberations during the year — especially in December, at a day-long meeting held in Richmond. In addition, members of the Technical Work Group traveled to Smith and Tangier islands in the fall to spend

time crabbing with commercial watermen and to join in frank discussions about the current state of the fishery and possible plans for the future. Also during the past year, researchers and managers met in a special technical "charrette" to address two key issues facing the blue crab fishery: the recent expansion of the peeler and soft crab sector, and the lack of accurate tracking of effort in the crab fishery as a whole.

Their efforts to analyze these issues continue, but several conclusions have emerged. For example, the study found that Maryland, after an initial decline in soft and peeler harvests from 1981-1988, relative to total landings, saw an increasing trend during the 1990s. In the last year examined (2000), soft and peeler landings in Maryland represented 10.9 percent of the total commercial landings in the state. Virginia saw a consistent increase over the 20-year period, from an initial level for soft and peeler landings of 2 percent of total harvest, to 11.5 percent by 2000. According to the Virginia Marine Resources Commission, recent increases in effort in the Virginia peeler fishery have not improved catch — so the catch per unit effort has actually dropped.

In general, the experts found, the effort in the soft and peeler fishery has increased Baywide, and the proportion of soft and peeler crabs relative to total landings has increased. More research and analysis are required to determine the precise effect of this shift in crabbing effort on the blue crab fishery as a whole.

Also of concern to the Technical Work Group is the lack of solid information about the number of pots and other gear deployed at any given time throughout the Chesapeake Bay. While licenses and other reports may give an indication of a range of effort — how many pots, for example,

Toward a New Dialogue

Beneath a sky scrawled with lightning, a line of workboats puts out from Virginia's Tangier Island. Low-slung and rigged for scraping crabs, most of the boats lack cabins or other protection from the weather.

As the boats pass out of the channel, lightning quickly brightens a white cross stuck in the mud of the marsh. Then the waters go dark again, the wash of waves mingled with the roar of diesel engines.

Jan Marshall, a crabber and a commercial waterman like his father before him, seems only slightly concerned. He jiggles the tiller back and forth, keeping the bow headed toward shallow grass flats marked in his memory. The weather will hang off to the east, he predicts, and as the dawn wears on it proves him right.

Also riding the dark waves toward their chosen scraping grounds are other watermen, including Dwight Marshall, Steve Pruitt and James "Ooker" Eskridge. On board their boats this squally September morning are unusual guests — scientists and technical experts, including Jacques van Montfrans from VIMS, Jack Greer from Maryland Sea Grant, Glenn Davis from Maryland DNR, and Ann Swanson, the Commission's Executive Director. These and other experts from the Bi-State Blue Crab Advisory Committee's Technical Work Group have journeyed to Tangier to meet and speak with local watermen, and this morning they have signed up as crew to see firsthand what the crabbers are seeing as the scrapes come aboard.

"Looks like you brought us some good luck," Marshall grins, as another scrape comes aboard with blue crabs — "peelers," ready to shed. "See all those small crabs? That's what we wanted you to see," Marshall says. And sure enough, among the market-size peelers scores of tiny crabs, about an inch across, scurry back overboard. According to Marshall and the others, these one-inch crabs hold solid promise for the future, and with their scrappy vulnerability,

in some way they seem metaphors for the Bay itself and for all those who depend on these waters for a livelihood.

The Commission Reaches Out

Bringing scientists to meet directly with watermen represents an effort by the Commission's BBCAC to form stronger lines of communication between those who study the crab and those who work the water for a living. "The combined knowledge is staggering. We need to harness that knowledge and apply it to our solutions," says Virginia Delegate Bob Bloxom who co-chairs BBCAC and represents Tangier Islanders in the Virginia General Assembly.

So for two days on Tangier and two days on Maryland's Smith Island, private conversations allowed both groups to see more clearly where cooperation is possible and where it is unlikely. "The idea was to create a safe place where scientists could honestly admit what they don't know, and where watermen could share their frustrations, their fears, and what generations on the water have taught them," Swanson said. "Spending time together on the water and talking honestly about the future was truly a privilege. The Commission intends to repeat this process in other places in an effort to learn more."

In fact, the entire effort of the BBCAC has been to reach consensus among a range of stakeholders, including watermen, seafood processors, technical experts, conservationists and political leaders. Chief among the questions and challenges are these: Is the Bay's blue crab stock really in trouble? If so, what are the primary causes of the problem and what are the most likely solutions? If fishing effort needs to be better managed, how should that be done? How can all three jurisdictions assure an effective management plan that is also fair and equitable?

The answers to such difficult questions will provide lasting solutions.

a crabber is licensed to use — those numbers do not reflect how many pots that crabber may actually have overboard at any particular time. Technical experts are examining such tools as aerial surveys and onboard or dockside observers to help garner more accurate information about the fishing effort for crabs in the Chesapeake.

At the same time, the jurisdictions have been working to document the size of the Bay’s recreational crabbing fishery. Preliminary results in Maryland suggest that recreational crabbing last year took some 15 percent of the state’s catch. A survey in the Potomac River suggested that recreational crabbing represents only a small fraction of the harvest there — no surprise, since most recreational crabbing takes place in creeks under the jurisdiction of either Maryland or Virginia. A similar survey is now being analyzed in Virginia, with results due out soon.

Where Are We Now?

Based on information provided by the Chesapeake Bay Stock Assessment Committee, the Maryland Department of Natural Resources, the Virginia Marine Resources Commission, the Academy of Natural Sciences, the Virginia Institute of Marine Science, the University of Maryland Center for Environmental Science and others, the Technical Work Group issued in December a Status Report for the 2001 Blue Crab Fishery. This status report summarizes both the fisheries independent surveys that estimate stock size and the results of the season’s crab harvest.

Of special interest this year were various regulations put in place by Maryland, Virginia and the Potomac River Fisheries

Commission to reduce fishing pressure by approximately 5 percent — part of a three-year effort to reduce fishing effort by 15 percent, to bring the Bay’s blue crab fishery toward a sustainable level.

The sustainable level recommended by the Technical Work Group represents the current state of fisheries science and follows protocols set for other fisheries around the world. The recommended target represents a fishing pressure that should double the size of the current spawning stock biomass, and assures a level of fishing effort that will not lead to “growth overfishing,” where crabbers are driven to harvest smaller and smaller crabs.

This fall, crabbers pulled in numbers of very large crabs — in the range of 8 and 9 inches, for example — lending support to the belief that Bay blue crabs will indeed grow larger if given the chance.

The Status Report noted that while the closing months of the 2001 showed promise, the beginning of the season had been slow for many in the region, and harvests in all three jurisdictions still lag far below the long-term average. Furthermore, the Status Report points out that the season began with surveys indicating a stock that was “fully exploited,” with a crucial segment of the crab population approaching a low not seen since the 1960s, and with female abundance the lowest since record-keeping began.

Finally, while recent trawl surveys conducted by the Virginia Institute of Marine Science have shown for the first time in several years an increase in spawning stock biomass, the recent average is still low. Though the trawl survey and the fairly good end of the season offer hope for the near future, the Technical Work Group concluded that it will be important

to stay the course, and let the current regulatory strategy continue to work.

The Critical Role of BBCAC

The Bi-State Blue Crab Advisory Committee is now six years old. In its effort to protect the Chesapeake’s last great fishery, BBCAC has faced a daunting challenge — and it has achieved remarkable success. Central to its mission is the gathering together of legislators, fisheries managers, watermen, seafood processors, scientists and other experts, all in common purpose. As 2001 drew to a close, each of the three regulatory jurisdictions — Maryland, Virginia and the Potomac River Commis-

sion — had instituted restrictions to reduce fishing pressure on the blue crab. These management actions were calculated to achieve one-third of the estimated 15 percent reduction required to reach the new target established by BBCAC — the first Baywide crabbing target ever.

The BBCAC’s commitment to an ambitious Baywide management strategy symbolizes the dedication and seriousness with which the group has worked to ensure, in fulfillment of a public trust, the sustainability of the Bay’s invaluable blue crab.

As the co-chairs of the Bi-State Blue Crab Advisory Committee have said, “We have a plan and we need to stick to it.”



THE NORTH RIVER'S JOURNEY - PHOTO © DAVE HARP

Annapolis, Maryland

January 4 & 5, 2001

THURSDAY, JANUARY 4

- Call to Order
- Roll Call
- Adoption of Minutes
- Adoption/Modification of Agenda
- Welcoming Remarks
 - WILLIAM C. BAKER, *Chesapeake Bay Foundation*
- Achieving Our Water Quality Goals
 - A series of presentations focusing on the challenges in meeting the Chesapeake 2000 nutrient and sediment reduction goals and the policy issues that must be addressed.
 - **Part I: Scoping the Issues**
 - BILL MATUSZESKI, *Chesapeake Bay Program*
 - **Part II: Trading**
 - ROBERT YOWELL, *Nutrient Trading Negotiation Team*
 - **Part III: Susquehanna Sediments**
 - Implications for Chesapeake 2000 Goals
- Moderator: TOM BEAUDUY
 - Dynamics of Sediment Transport in the Basin
 - MICHAEL LANGLAND, *U.S. Geological Survey*
 - Potential Bay Impacts: STAC Workshop Findings
 - RICHARD A. WEISMILLER, *Chesapeake Research Consortium*
 - Sediment Reduction Strategy Implications
 - RICHARD BATIUK, *Chesapeake Bay Program*
 - Sediment Task Force Recommendations
 - PAUL SWARTZ, *Susquehanna River Basin Commission*

Forging a Partnership for the Baltic Sea: Commission joined by an international delegation exploring the feasibility of establishing a commission among Sweden, Norway and Denmark.
DR. ANNA JOEBORN, *Nature Conservation and Fisheries, Vaestra Goetaland, Sweden*
RUNE BERGSTROEM, *Environment and Planning Division, Oestfold, Norway*

FRIDAY, JANUARY 5

Breakfast Delegation Meetings

Chairman's Update: Ongoing Commission Activities

- SENATOR BRIAN E. FROSH
 - CBC Budget Requests
 - Mute Swan
 - Phragmites
 - Combined Sewer Overflow

Achieving Our Land Preservation Goals

A presentation of the draft report on the steps needed to accomplish the Chesapeake 2000 land preservation goals. The report offers opportunities for action, catalogued by state.
ANN SWANSON
DEBI L. OSBORNE, *Chesapeake Field Office, The Trust for Public Land*
ANDY MCLEOD, *State Government Finance, The Trust for Public Land*

Achieving Our Blue Crab Management Goals

A presentation of the Bi-State Blue Crab Advisory Committee's recommendations followed by a dialogue with the management agencies. The harvest target proposed will fulfill the crab-related commitments in *Chesapeake 2000*.
• **Introduction**
DELEGATE ROBERT S. BLOXOM
DELEGATE JOHN F. WOOD, JR.

Quarterly Meeting Agendas

- Recommendations to the BBCAC
ANN SWANSON
- State Response and Expected Actions
ERIC SCHWAAB, *Maryland Department of Natural Resources*
A.C. CARPENTER, *Potomac River Fisheries Commission*
JACK TRAVELSTEAD, *Virginia Marine Resources Commission*

Legislative 2001 General Assembly Sessions

- Maryland
SENATOR BRIAN E. FROSH
DELEGATE CHARLES A. MCCLENAHAN
- Pennsylvania
REPRESENTATIVE ARTHUR D. HERSHEY
SENATOR NOAH W. WENGER
- Virginia
SENATOR BILL BOLLING
DELEGATE ROBERT S. BLOXOM

Election of the 2001 Commission Officers

Outgoing 2000 Chairman’s Remarks
SENATOR BILL BOLLING

Incoming 2001 Chairman’s Remarks
SENATOR BRIAN E. FROSH

New Business

Stevensville, Kent Island, Maryland

May 10 & 11, 2001

THURSDAY, MAY 10

Call to Order

Roll Call

Adoption of Minutes

Adoption/Modification of Agenda

Welcoming Remarks
ANDREW McCOWN,
Chester River Association

Chairman’s Update
SENATOR BRIAN E. FROSH

- Introduction Announcement of the FY 2002 budget
- Gateways and Water Trails: Opportunities for Local Funding

Raising The Dollars Needed:
Making Headway on “C2K”
An early assessment of what it will take to implement the commitments of *Chesapeake 2000 — A Watershed Partnership*.

J. CHARLES FOX, *Chesapeake Bay Foundation*

Competing for Federal Money
How to attract enhanced federal funding for the Bay restoration efforts.
Moderator: J. CHARLES FOX
CHARLES STEK, *Office of Senator Paul Sarbanes (MD)*
ANN LOOMIS, *Office of Senator John Warner (VA)*
DYLAN JONES, *Office of Representative Paul E. Kanjorski (PA)*

Legislative Approaches and Accomplishments for Permanently Preserving Land

- Keeping Our Commitment: Impact of the CBC/TPL Report
DEBI OSBORNE, *The Trust for Public Land*
- Innovative Legislation and Action in Land Conservation
Moderator: ANN SWANSON
Conserving the States’ Green Infrastructure
ED MCMAHON, *The Conservation Fund*
Dedicating Funds for Implementation: Promoting State/Local Leadership and Financing Partnerships
MATT ZEIPER, *The Trust for Public Land*

Next Steps for a Legislative Agenda

FRIDAY, MAY 11

Breakfast Delegation Meetings

Legislative 2001 General Assembly Sessions

- Pennsylvania
REPRESENTATIVE RUSS FAIRCHILD
SENATOR NOAH W. WENGER
- Virginia
DELEGATE ROBERT S. BLOXOM
SENATOR BILL BOLLING
- Maryland
SENATOR BRIAN E. FROSH
DELEGATE CHARLES A. MCCLENAHAN

Chesapeake Bay Commission Funding
Fiscal Year 2001-2002 Budget

Advances In Fisheries Management

- Understanding the Impact of Predation
JACQUES VAN MONTRFANS, *Virginia Institute of Marine Science*
- The Challenges of Multi-species

Management
KEN HINMAN, *National Coalition for Marine Conservation*

Managing Use Conflicts In The Shallows

- Use Conflicts Before the General Assemblies
MEMBER DISCUSSION
- Tools for Assessing and Resolving Conflicts
RUSS BAXTER

New Business

Harrisonburg, Virginia

September 6 & 7, 2001

THURSDAY, SEPTEMBER 6

A Meeting About Water
SENATOR BRIAN E. FROSH
Afternoon’s activities to examine the elements of a tributary strategy, highlighting those that show the most promise for achieving nutrient reductions.

Part 1: Nonpoint Sources

En route Orientation: The Lands and Waters of the Shenandoah Valley
BILL PATTERSON, *Natural Resources Conservation Service*

Stop 1: Managing Agricultural Nutrients in the Shenandoah Valley

- Nutrient Practices on the Farm
CHARLES HORN, Farm Owner
CHUCK HORN, Son
- Poultry in the Shenandoah Valley
HOBEB BAUGHAN, *Virginia Poultry Federation*
- Reducing Nutrients through Public/Private Partnerships
JACK FRYE, *Virginia Department of Conservation and Recreation*
- Nutrient Reductions through Innovation
VERNON MEACHAM, *Harmony Products*

En Route Orientation: Point Source Reductions in the Shenandoah/Potomac Watershed and Future Challenges
JOHN KENNEDY, *Virginia Department of Environmental Quality*

Part 2: Point Sources

Stop 2: Harrison-Rockingham Regional Service Authority North River Plant

- What it Takes to Implement Nutrient Removal
CURTIS POE, *Harrison-Rockingham Regional Sewer Authority*
- En Route Discussion: The Status of Finding Federal Funding for Water Quality, Land Preservation and Education
ANN SWANSON

Part 3: Local Stewardship

Stop 3: Local Perspectives

- Protecting Watersheds through Local Initiative
BOB HOLTON, *Town of Bridgewater*
BOBBY WHITESCARVER, *Valley Conservation Council*
- Watershed Education in the Valley
JOSEPH H. MAROON, *Chesapeake Bay Foundation*
JOHN PAGE WILLIAMS, *Senior Naturalist*
BILL PORTLOCK, *Senior Educator*
DEIDRA CERVENAK, *Virginia Senior Education Manager*
JEFF CORBIN, *Staff Scientist*

FRIDAY, SEPTEMBER 7

Breakfast Delegation Meetings

Gaps and Caps: Meeting Our Water Quality Goals

- Are the Rivers Running Cleaner? Tracking Our Progress Tributary-By-Tributary
SCOTT PHILLIPS, *U.S. Geological Survey*
- What Happens after 40 Percent? Evolving from Tributary Strategies to Cap Strategies
TOM SIMPSON, *Nutrient Subcommittee*
- Will We Avoid a Regulatory Process? Integrating the Tributary Strategies with the new C2K Commitments and the TMDL Requirements
AL POLLOCK, *Virginia Department of Environmental Quality*
- Identifying Funding Opportunities
ANN SWANSON, “Lego” *Workgroup Chair*
TOM SIMPSON

Factoring Sediment Into the Water Quality Equation

The Sediments Behind the Susquehanna Dams
TOM BEAUDUY, *Susquehanna Sediment Task Force Chair*

New Business

Williamsport, Pennsylvania

November 8 & 9, 2001

THURSDAY, NOVEMBER 8

Following The Sediment Issue Up Into The Watershed

- Our Commitment to Watershed Restoration Through C2K
RUSS BAXTER
- Sediment Task Force Recommendations and the Implications of Sediment Baywide
TOM BEAUDUY

Stream Restoration

Briefing on new approaches to stream restoration and efforts currently underway on Big Bear Creek at both the Sunbury Grouse Club and at the adjoining Dunwoody Club, followed by field tour of the Creek.

- Restoration through Natural Stream Channel Design
STACEY CROMER, *Canaan Valley Institute*
- Big Bear Creek Restoration Project
BILL WOROBEK, *Dunwoody Club*
MEL ZIMMERMAN, *Lycoming College*

Dinner Guest Speaker

A Historical Perspective on Forestry in the Upper Susquehanna

JIM NELSON, *PA State Forester (Retired)*

FRIDAY, NOVEMBER 9

Breakfast Delegation Meetings

Call to Order

Roll Call

Adoption of Minutes

Adoption/Modification of Agenda

Chairman's Update: Ongoing Commission

Activities

SENATOR BRIAN E. FROSH

- Lego Workgroup/Farm Bill
- 12/03 Chesapeake Executive Council Meeting
- BBCAC
- 2002 Commission Meeting Schedule

Panel Discussion: Forestry for the Bay

WILLIAM MATUSZESKI, *Moderator*

- Forest and Watershed Health: Linking Forests and Forestry to Bay Restoration Goals

AL TODD, *US Forest Service*

- Managing Public Forestlands to Achieve our Goals

JIM GRACE, *PA State Forester*

- Managing Private Forestlands to Achieve our Goals

MIKE FOREMAN, *VA Department of Forest*

- Balancing Management and Conservation to Achieve our Goals

EVAN SMITH, *The Conservation Fund*

- Forestry Policy Issues Forum

WILLIAM MATUSZESKI, *Facilitator*

New Business

Appendix

Credits

Seeking Solutions, the 2001 Annual Report of the Chesapeake Bay Commission, was prepared by Commission staff with the editorial assistance of Pat Herold Nielsen. Both she and Jack Greer were contributing writers.

Design: Peter M. Gentile, CartaGraphics Inc. (cartagraph@aol.com)

Photography: David Harp (dharp@chesapeakephotos.com)

Cover photo: Bishop's Head, Maryland, near Blackwater Marsh © David Harp



ABOUT THE PHOTOGRAPHER

Dave Harp teamed up with writer Tom Horton for a book of essays and photographs, *Water's Way: Life Along the Chesapeake*, published by Elliott and Clark in 1992 and reissued in paperback by The Johns Hopkins University Press. Mr. Harp and Mr. Horton have collaborated on a book about journeys into the Chesapeake wetlands, titled *The Great Marsh*, to be published by Johns Hopkins in 2002.



PHOTO ©DAVE HARP

STANDING Glenn Markwith (Navy), Scott Philips (USGS), Steve Olson (Navy), Larry Tropea, George Wolff, Sen. Lowell Stoltzfus, Patsy Cress, Irvine Hill, Sen. Bill Bolling, Rep. Russ Fairchild, Sen. Brian Frosh, Sen. Marty Williams, Pat Stuntz, Tom Beauduy, Del. Charles McClenahan, John Page Williams (CBF), Tom Simpson (UMd), Russ Baxter.

SEATED Rep. Art Hershey, Ann Swanson, Sen. Bernie Fowler, Del. Thelma Drake

CHESAPEAKE BAY COMMISSION

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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