



THE COMMONWEALTH OF VIRGINIA'S 1999 BAY PROGRAM ACCOMPLISHMENTS

With Governor Gilmore's commitment to improve water quality, unprecedented funding for that purpose, continuing efforts to develop tributary strategies, the initiation of a major oyster restoration program, and other activities, 1999 proved a banner year for Virginia as a partner in the overall Chesapeake Bay Program effort. Here is a partial listing of Virginia's accomplishments in 1999.

The Virginia Oyster Heritage Program: The Virginia Dept. Of Environmental Quality's Coastal Management Program and the Virginia Marine Resources Commission are partnering with state and federal agencies, non-profits and business to launch a large-scale oyster restoration effort. Beginning in the spring of 2000, phase one of the Virginia Oyster Heritage Program will include the construction of eight, one-acre 3 dimensional broodstock sanctuary reefs in the Rappahannock River. Each reef will be surrounded by 25 acres of restored shell bottom for enhanced harvest to provide a sustainable fishery for Virginia watermen who will also be contracted to clean and prepare each 26 acre site. The reefs will be monitored to determine their success in increasing oysters, water clarity, and biodiversity; educational materials will be prepared and volunteers will be trained for restocking efforts. The Virginia Oyster Reef Heritage Foundation has been established as a nonprofit organization to raise private funds to match private challenge grants and public agency grants.

Water Quality Improvement Fund and Legislative Actions: Commitment to achieving Chesapeake Bay and tributary nutrient reduction goals remains strong in Virginia. A key incentive aiding implementation of point and nonpoint source control actions continues to be the Water Quality Improvement Fund (WQIF), created by the 1997 Water Quality Improvement Act (WQIA). Cost-share provided by the WQIF has supported ongoing progress made under the Shenandoah-Potomac Tributary Strategy, and the Commonwealth is poised to make significant funding available to the lower tributaries (Rappahannock, York, James and small coastal basins) in the current grant cycle.

In 1999, Governor Gilmore and the General Assembly approved a \$39.06 million deposit into the WQIF. Of that, \$9.83 million is for nonpoint source projects and \$24 million is for point source projects during fiscal year 2000. The balance of these new funds either is designated for specific Department of Environmental Quality (DEQ) and Department of Conservation and Recreation (DCR) activities in support of nutrient reduction actions and tributary strategy implementation (\$1.68 million), or is interest credited to the WQIF plus non-specific appropriations (total of \$3.55 million). That amount will be allocated by the Secretary of Natural Resources between point and nonpoint source programs after receipt of grant applications. The Appropriations Act also specified that the additional point source program funds were to be used for nutrient removal facilities in the James, Rappahannock, York and small coastal basins. Ongoing point source projects in the Shenandoah-Potomac basin will continue to be funded with grant monies provided by the 1997 and 1998 Appropriation Acts.

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The following items represent recent accomplishments made under the WQIF:

—Thirty-two special projects totaling \$3.325 million were made available by DCR with WQIA funds. The Shenandoah-Potomac river basin was granted \$1.85 million of the funds for 17 projects, and the state's lower bay tributary basins received \$975,000 for nine projects. The projects, which address NPS pollution, are being managed through soil and water conservation districts, resource conservation and development councils, state colleges and universities, local governments and agribusiness partners.

—In July 1999, WQIA funding of about \$9.45 million was added to the Virginia Agricultural Best Management Practices (BMPs) Cost-Share Program's bay area efforts. Another \$1.5 million was earmarked for rivers not draining into the bay. This additional funding was prompted by the success of the program, which is administered by DCR through the state's soil and water conservation districts. 1999 saw more farmers put more acres into BMPs using state cost-share funds than ever before. Reductions included more than 2.6 million pounds of nitrogen, 543,146 pounds of phosphorus and 470,205 tons of soil. More than 1,200 farmers participated and installed more than 1,300 practices covering 90,000 acres.

—In 1999, for the first time, DCR helped farmers in the Shenandoah-Potomac river basin by sharing the cost of nutrient management plans written by certified consultants. Nutrient management planning and the implementation of nutrient management BMPs have been identified as key factors in meeting nutrient reduction goals of the basin's tributary strategies.

—Progress continues on point source nutrient reduction projects under 15 signed WQIF grant agreements in the Shenandoah-Potomac river basin. These active projects account for approximately \$57.84 million in 50 percent cost-share for the design and installation of nutrient reduction systems. To date, nearly \$12.3 million has been provided in reimbursement payments to these grantees for work accomplished. Once operational, these systems will remove about 6.7 million pounds of nitrogen and 91,000 pounds of phosphorus per year.

—Two grant agreements were signed with Dale Service Corp. for projects involving privately owned sewage treatment plants serving residential areas in the Shenandoah-Potomac river basin. These projects will use about \$4.1 million of the \$6 million appropriated by the General Assembly for this type of project. The balance, \$1.9 million, is the subject of current grant negotiations with Sheaffer International Ltd. Clean Water for a proposed project in the Shenandoah Valley. It will serve two towns and two poultry producers.

—The town of Purcellville signed a \$1.6 million grant agreement to include nutrient reduction in a new 1.0 MGD wastewater plant to replace their old facility. DEQ continues to seek participation in the WQIF cost-share program by all significant (larger than 0.5 MGD) municipal wastewater facilities in the Shenandoah-Potomac basin. Not all facilities eligible under the WQIF have applied for a grant, and some owners were not targeted in the tributary strategy for nutrient reduction during the initial stages of implementation. While smaller in size compared with those of many earlier grant projects, these plants can play an important role in achieving the 40 percent reduction goal.

—Negotiations continue with the District of Columbia Water and Sewer Authority to purchase additional nutrient reduction at the Blue Plains facility through a WQIF grant. The 1998 General Assembly authorized use of up to \$3.35 million for this purpose. Because several of the large plant retrofits underway in Virginia will not be on-line by 2000, one interim measure is to take advantage of the cost-effective opportunity presented by this major Washington, D.C., facility. Blue Plains has the potential to reduce greater amounts of nutrients by operating at higher removal efficiencies. Through a contractual agreement between Virginia and Washington, D.C., there is a much greater

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chance of meeting the 40 percent goal for the Potomac through enhanced removals at Blue Plains.

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Development of Strategies for Virginia's Lower Bay Tributaries: Staff from state natural resources agencies worked this past year with local governments, SWCDs and other interests to develop nutrient reduction goals for Virginia's lower bay tributaries. These are also the first tributary strategies in the bay watershed to include sediment, as well as nutrient, reduction goals. Strategies for the four tributary regions are either complete or nearly so. Development of the strategies relied heavily on CBP monitoring and modeling data.

—Nonpoint sources contribute 80 percent of the controllable nutrient load in the *York's* watershed. Point sources account for the rest. The York team called for reductions of 2.3 million lbs of nitrogen, 60,000 lbs of phosphorus and 9,000 tons of sediment by the year 2010, using 1996 as the base. Costs for implementing strategies needed to achieve these goals are estimated at \$45 million over 10 years.

—The *Eastern Shore's* strategy goal focuses mainly on restoring SAV acreage to historical levels. Shore region interests agreed to work towards year 2003 targets, which, if implemented, would result in additional NPS reductions of 120,700 lbs of nitrogen, 14,000 lbs of phosphorus and 3,000 tons of sediment, using 1985 as the base year. (These numbers are beyond 1997 estimated reductions.) Costs for implementing the 2003 target reductions are estimated at \$2.8 million.

—The bay water quality model projects needed load reductions of 33 percent for nitrogen, 29 percent for phosphorus and 20 percent for sediment to meet the *Rappahannock* basin's strategy goals. Those three goals, set for 2010, are meant to reduce by 50 percent the river's annual volume of anoxic water and to increase by 50 percent the density of SAV. Planning level cost estimates over the next 11 years for implementing practices to achieve such reductions run about \$8.79 million for point sources and \$39.4 million for nonpoint sources. Both figures assume state cost-sharing (50 percent for point sources and 75 percent for NPS). A re-evaluation of this strategy will be undertaken in 2002.

—Regarding the *James*, while numerous water quality and living resources issues were identified during eight meetings, the technical review committee has yet to reach consensus on nutrient and sediment goals. A document further exploring establishment of James River goals will soon be available, and the document will undergo a public review and comment period beginning this month and running through the first of the year

The Chesapeake Bay Preservation Act: Those implementing Virginia's Chesapeake Bay Preservation Act continue to work with Tidewater Virginia localities, soil and water conservation districts (SWCDs) and planning district commissions (PDCs) to protect the water quality of the Chesapeake Bay and its tributaries. This is done by managing impacts from the use and development of land. The goal of the act is to achieve no net increase in nonpoint source pollution as development in Tidewater occurs. Eighty-four units of local government, with land draining to the Chesapeake Bay, are subject to the provisions of the act. During 1999, the following was accomplished:

—Fifty-four localities had various program review and approvals undertaken by the Chesapeake Bay Local Assistance Board. All 84 local governments now have ordinances incorporating into local law the act's requirements. Of these, 66 have had comprehensive plans, which are reviewed by the board, that provide protection to environmentally sensitive areas. The remaining 18 have either an active review underway or a deadline established for such plan review.

—The Chesapeake Bay Local Assistance Department (CBLAD) began evaluating local government implementation of water quality performance standards through the investigation of complaints. More than 150 complaints have been reviewed.

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—In fiscal years 1999 and 2000, CBLAD provided 45 grants totaling \$943,224 to local governments and PDCs within Virginia's lower tributary basins, and grants amounting to \$206,428 were made to those within the Shenandoah-Potomac Tributary basins. The grants are for land use and water quality planning projects.

—CBLAD in 1999 commented on approximately 125 federal, state, local site plans and environmental impact reviews (EIRs), assuring compliance with the act.

—In FY 1999, CBLAD provided \$450,500 in grants to 11 Tidewater Virginia SWCDs. This resulted in bringing another 30,377 acres of farmland under conservation plans and added 59 miles of buffer areas to Virginia's waterways.

Virginia's Riparian Buffer Initiative: In 1996 the Executive Council adopted a goal of 2,010 additional miles of riparian forest buffer Baywide by 2010 with the Virginia portion being 610 miles. Under the Virginia Riparian Buffer Initiative we have restored more than 140 miles of forest buffer in the bay's watershed and 162 miles statewide. Governor Gilmore signed an executive order in August 1999 which outlines state agency commitments to this initiative, sets up a Riparian Working Group chaired by the State Forester, and describes efforts to meet the goals of the bay adoption agreement.

Citizen Monitoring Agreement: The 1998 Letters of Agreement signed by DCR, DEQ and the Virginia Save Our Streams Program were a great success. The items in the agreement were accomplished and, as a result, water quality data collected by citizens will be used in the 2000 305(b) Water Quality Report. Based on the success of the two 1998 agreements, the same partners on October 29, 1999, signed an agreement to continue building Virginia's citizen monitoring program.

Adopt-a-Stream Program: This Gilmore Administration supported water quality initiative came out of the 1998 General Assembly. 1999 marks the first active year of the program, which has seen 99 groups sign up. They have adopted 284 miles of streams statewide. Sixty seven of the groups adopted 202 miles that are in the bay watershed

Fish Passage

Recent completion of a vertical slot fishway at Boshers Dam in Richmond reopened approximately 337 miles of historical spawning habitat for migratory fishes in the James River and its tributaries from the Richmond fall line to Lynchburg. This fish passage has reopened the most miles of historic spawning habitat of any single facility anywhere in the United States.

Shad Restoration

Since 1992, the Department of Game and Inland Fisheries has conducted an American shad restoration effort in cooperation with other state and federal natural resource agencies, the Mattaponi and Pamunkey tribal governments, and the private sector. This effort has focused on reestablishment of American shad in the upper James River and is being conducted in conjunction with fish passage initiatives. Initial results indicate that the stocking program is beginning to recruit adult shad to the James River ecosystem.

Dameron Marsh Natural Area Preserve: The 316-acre Dameron Marsh was recently purchased by the state with funding assistance from the Nature Conservancy, the U.S. Fish and Wildlife Service, the Army Corps of Engineers, the Northern Neck Audubon Foundation and the 1992 Virginia Parks and Natural Areas general obligation bond. The property is managed by DCR. About 90 acres of the preserve had been farmed; that land was reforested using native species. The plantings increased habitat and bring Virginia closer to its goal of planting 610 miles of forested buffers

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along streams in the Chesapeake Bay watershed.