



Chesapeake Bay Program

# BAYWIDE NUTRIENT REDUCTION PROGRESS AND FUTURE DIRECTIONS



The 1987 Chesapeake Bay Agreement established the goal to attain the water quality necessary to support the living resources of the Bay. As part of that historic agreement, we committed to reduce nitrogen and phosphorus loadings to the Bay from controllable sources by 40 percent by 2000, using 1985 as a base year. In 1992, we reaffirmed this goal and committed to attain it through the use of individual tributary strategies to meet nutrient reduction loading levels established for all major tributaries. We also committed to maintaining these reduced loading levels beyond 2000.

This year, we have conducted an extensive reevaluation focused on answering the following questions:

- ◆ Will we meet the 40 percent reduction by 2000?
- ◆ Are the nutrient reductions being achieved through the tributary strategies?
- ◆ Are we achieving the water quality necessary to support living resources?

We have made impressive progress toward the nutrient goals we set ten years ago. Throughout the watershed, many of our rivers are running cleaner as a result of the investments we and others have made. For the region where we have tributary strategies in place, we project we will achieve the overall reduction goals. Where strategies are not yet in place, there are statutory deadlines to complete them and to set appropriate goals. Had we not taken the steps we have, there is evidence that conditions in the Bay and its rivers would have worsened. However, if we do not speed up implementation of our strategies, some planned improvements will not be in place until after 2000.

While we recognize the need to accelerate our efforts to achieve the goals set in 1987, we also realize that those goals may not be enough to assure the Bay's restoration. We have learned a great deal in the last decade about how storm events, groundwater releases, and other natural and manmade conditions affect the pace of recovery for the Bay and its rivers. Lack of a water quality response in some areas of the Bay and recent evidence of possible effects of high loadings of nutrients on living resources and human health tell us we must be prepared to set tougher and more area-specific goals as new information becomes available. We also need to assure the necessary programs and institutions are in place to maintain these lower nutrient loadings to the Bay in the future.

## THEREFORE, TO FURTHER OUR COMMITMENTS MADE IN THE CHESAPEAKE BAY AGREEMENT:

We reaffirm our commitment to reach our phosphorus and nitrogen goals and maintain at least those levels beyond 2000, for participating states with tributary strategies in place. We support the Commonwealth of Virginia's commitment to complete tributary strategies for its lower Bay tributaries in accordance with statutory deadlines by supplying a state-of-the-art water quality model to help establish nutrient goals for those rivers. In order to meet our nutrient reduction goals by the year 2000, we must emphasize those measures which will be quickest to implement and most immediately cost effective; therefore, in many cases we must build on the substantial progress already made by local governments to upgrade wastewater treatment facilities. We call for the following full range of actions, where feasible, cost effective and equitable, to speed up and augment current efforts:

- ◆ Accelerate nutrient reduction at wastewater plants currently scheduled for improvements after 2000.
- ◆ Implement low cost modifications where such accelerated installation is not feasible, in order to obtain near-term partial nutrient reductions.
- ◆ Encourage voluntary efforts to achieve additional interim reductions from major wastewater treatment plants where nutrient reduction technologies are in place or will be by 2000, but where still higher levels of removal can be obtained from process changes or year-round operation, and support those efforts through innovative federal, state, and local cost sharing arrangements.
- ◆ Encourage commitments for additional nutrient reductions from private sector facilities with high loading rates.
- ◆ Prioritize implementation of point and nonpoint source reduction and prevention actions which will be minimally

affected by lag times associated with groundwater nutrient delivery, with particular focus on areas with critical living resource or human health concerns.

- ◆ Encourage development and use of innovative point source control technologies and new approaches to nonpoint source reductions.
- ◆ Initiate cooperative efforts with the states of Delaware, New York, and West Virginia, with emphasis on New York wastewater treatment plants and on agricultural nonpoint source management in Delaware and West Virginia.
- ◆ Work toward additional reductions of airborne nitrogen delivered to the Bay and its watershed from all sources including states outside the watershed, and seek improved understanding of how airborne nitrogen affects the Bay and its tributaries.
- ◆ Develop new partnerships at the community level to engage increasing numbers of citizens of the Chesapeake watershed in the clean-up effort through such steps as the Community Watershed Initiative which we launch today by a separate Directive.

We commit to continued efforts to refine our monitoring and modeling of the Bay and its watershed to assure the most accurate measures of progress. Beginning in 1998 we will use monitoring data and the upgraded Bay Water Quality and Watershed Models to tell us if our current nutrient reduction goals

will result in the water quality improvements needed to sustain living resources in the Bay and its tidal tributaries. Assuming the modeling tools are available, we direct that the following efforts be undertaken by the Chesapeake Bay Program:

- ◆ During early 1998, to use the upgraded models to help set goals for the Virginia tributaries below the Potomac.
- ◆ By the 1998 Meeting of the Executive Council, to conduct an analysis and prepare a protocol, which will include a public participation component, to determine whether nutrient goals and reduction efforts can further be targeted to areas of persistent high loadings, especially where evidence indicates a linkage to critical living resources or human health concerns.
- ◆ By the 1999 Meeting of the Executive Council, to prepare preliminary recommendations, in consultation with local governments and others, for any adjustments to nutrient goals to assure the water quality that will support the living resources of the Bay and its tributaries.
- ◆ By the 2000 Meeting of the Executive Council, and based on continuing consultation with local governments and others, provide final recommendations for any adjustments to the nutrient goals.
- ◆ By the 2001 Meeting of the Executive Council, to complete adjustments of the tributary strategies to achieve any revised goals.

Finally, we commit to future generations that when we achieve the water quality necessary to support the living resources of the Bay, we will maintain it into the future. We believe we must begin planning now to assure we have the structure and capacity in place to take our efforts to restore the Bay and its tributaries into the next century, and meet the challenges that population and economic growth will bring to this commitment. We have confidence that our ability to work together, along with our continued reliance on sound science and technology advancement, can make this commitment a reality.

DATE: October 30, 1997

FOR THE COMMONWEALTH OF VIRGINIA



*George Allen*

FOR THE STATE OF MARYLAND



*Pat N. Gandy*

FOR THE COMMONWEALTH OF PENNSYLVANIA



*Tom Ridge*

FOR THE DISTRICT OF COLUMBIA



*Merrill Barr*

FOR THE UNITED STATES OF AMERICA



*Carl D. Rowan*

FOR THE CHESAPEAKE BAY COMMISSION



*W. Ogden Humphreys*