

Agricultural Nonpoint Source Initiative

Report to the Executive Council

September 1993



Chesapeake Bay Program

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This report was based on recommendations made by the three subcommittees of the Executive Council's Agricultural Nonpoint Source Initiative. For a detailed explanation of each recommendation, please refer to the specific subcommittee reports.

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Farm Organizations

American Farmland Trust
Maryland Association of Conservation Districts
Maryland Farm Bureau Federation
Maryland State Grange
Pennsylvania Association of Conservation Districts
Pennsylvania Farmers Association
Pennsylvania Farmers Union
Pennsylvania State Grange
Society of American Foresters
Soil Conservation Committees
Virginia Farm Bureau Federation

Agribusiness

Delaware/Maryland Agribusiness Association
Dupont
PENNAG Industries Association

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Maryland Department of the Environment
Maryland Department of Natural Resources
Maryland Governor's Office
Pennsylvania Department of Agriculture
Pennsylvania Department of Environmental Resources
Virginia Department of Environmental Quality
Virginia Department of Agriculture and Consumer Services

Universities

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College of Agriculture and Life Sciences, Virginia Polytechnic Institute and
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Legislators from Maryland, Pennsylvania and Virginia
Chesapeake Bay Commission

Federal Agencies

USDA Agricultural Stabilization and Conservation Service
USDA Cooperative Extension Service
USDA Forest Service
USDA Soil Conservation Service
US Environmental Protection Agency
National Oceanic and Atmospheric Administration

Environmental Organizations

Alliance for the Chesapeake Bay
Chesapeake Bay Foundation

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Introduction

The recommendations of the 1992 Nutrient Re-evaluation conducted by the Chesapeake Bay Program, the 1990 Nonpoint Source Evaluation Panel and others have demonstrated that the reduction of nutrients from agriculture and other sources is critical if we are to meet the forty percent nutrient reduction goal of the 1987 Amendments to the Chesapeake Bay Agreement. In August 1992, the Executive Council of the Chesapeake Bay Program launched the Agricultural Nonpoint Source Initiative to address the challenges that the agricultural community will face in reducing nonpoint source pollution. The Initiative was to develop specific recommendations for addressing the challenges that go beyond simply defining the problems found in research, coordination among agencies and technical assistance.

The Initiative effort brought together the agricultural and environmental sectors in the Bay Watershed to devise a joint strategy for agriculture in the Bay. This diverse group of over eighty people from Maryland, Pennsylvania, Virginia, and the District of Columbia included representatives from farm organizations, environmental groups, the private sector, research institutions, state legislatures, and agricultural and environmental agencies. The effort also included a significant number of federal representatives from the Department of Agriculture, the Environmental Protection Agency and the National Oceanic and Atmospheric Administration. For the first time in the Bay Program, all three states' Secretaries or Commissioners of Agriculture and heads of agricultural universities became directly involved in the Bay cleanup effort.

During the following year the Initiative Steering Committee and three subcommittees (Research; Technical Assistance, Outreach and Education; and Intergovernmental Coordination and Partnerships) met to develop recommendations that define actions that must be taken to reduce agricultural nonpoint source pollution. The efforts of subcommittees focused on reducing and controlling nutrients that reach the Bay by streamlining the delivery of services to the farmer by:

- ✧ Improving the coordination and partnerships among federal, state and local agencies that regulate or assist the agricultural community;
- ✧ Increasing the involvement of the agricultural community throughout the Chesapeake Bay Program and its awareness of agriculture's relationship to the environment;
- ✧ Linking agricultural research with agency and Bay Program needs;
- ✧ Developing new partnerships with the private sector to expand our current nonpoint source pollution prevention efforts.

The Bay's jurisdictions must develop a proactive and comprehensive agenda to address the increasing focus on agriculture by environmental programs and regulations. At the national level, the Coastal Zone Management Program will require coastal states to adopt seven specific management measures for agriculture that range from sediment control to pesticide management. Within the Chesapeake Bay Program, the Tributary Strategies will focus in part on the issues associated with agricultural nutrient runoff in the tributaries of the Chesapeake Bay. The recommendations made by the Initiative effort will help the states meet these new requirements.

On behalf of the Executive Council's Agricultural Nonpoint Source Initiative, the Steering Committee makes the following recommendations:

I. USDA Involvement in the Bay Program

The Steering Committee recommends that the Executive Council sign an agreement with the United States Department of Agriculture to form closer ties with USDA and to increase USDA's role in the Bay Program. The Executive Council also should meet with the Secretary of Agriculture to discuss these issues and others related to agriculture in the Chesapeake Bay.

The Steering Committee recommends that the USDA use the Chesapeake Bay Program as a pilot for integrated delivery of federal, state and local agricultural services.

As agriculture's role in the Chesapeake Bay restoration effort increases, strengthening the relationships between the United States Department of Agriculture and the Chesapeake Bay Program is essential to improving the delivery of services and programs to the agricultural community. The development of coordinated and complimentary federal, state and local agricultural programs is crucial to meeting agriculture's portion of the overall 40 percent nutrient reduction goal. Through a formal agreement between the Executive Council and the USDA, both organizations can work together to improve environmental programs for agriculture. Furthermore, the programs Maryland, Pennsylvania and Virginia are developing to integrate local, state and federal programs can be used as a national role model for enhancing service delivery to the agricultural community.

II. Total Resource Management Planning¹

Recommendations

The Steering Committee recommends that a total resource management planning (TRM) process be adopted in Maryland, Pennsylvania and Virginia to provide farmers with site specific plans that eliminate the conflicts and redundancy found in the current system of multiple plans. Individual state efforts should be communicated to the Chesapeake Bay Programs Nonpoint Source Subcommittee.

The Steering Committee further recommends that the Executive Council amend the Chesapeake Bay Agreement to incorporate the goals of developing and implementing the concept of total resource management on agricultural land. The Chesapeake Bay Program's Implementation and Principal's Staff Committees may want to examine how TRM can be moved forward in the Chesapeake Bay Program. The jurisdictions should report their progress in developing and implementing the concept of total resource management planning process to the Executive Council at its 1994 meeting.

Discussion

The total resource management process is a comprehensive approach to agricultural and natural resource management that meets the goals of and demonstrates environmental stewardship, maintains a viable agricultural economy and complies with governmental regulations. The process combines the talents of the federal, state and local planning and resource agencies to provide the farmer with a prioritized list of resource management options that may be adapted to the individual farm. This approach balances environmental needs with economic and planning resource limitations. It also provides the farmer with reliable, useful resource documents that can be referred to easily in land management.

Although each farm may not need all of the suggested components, the planning process should strive to incorporate as many as necessary to meet the site specific needs of the land and the land user and to respond to identified water quality and resource management needs. The plans should incorporate flexibility to easily adapt to the changing needs of the land and the economics of farming. In order to meet the 40 percent nutrient reduction goal, the jurisdictions should focus their efforts on implementing Soil and Water Resource and Nutrient Management components first. Although individual jurisdictions may modify the components, the Steering Committee recommends that the states include the following components for the initial stages the total resource management planning process:

1. Soil and Water Resource Management
2. Nutrient Management
3. Crop and Pest Management
4. Animal Management
5. Farmstead Assessment
6. Forest Management

¹ For a detailed discussion of the total resource management process, refer to the report of the Technical Assistance, Outreach and Education Subcommittee.

7. Wildlife Habitat Management
8. Economic Analysis
9. Regulatory Compliance.

III. Team Approach²

Recommendations

The Steering Committee recommends that the Governors of Maryland, Pennsylvania and Virginia form Policy Teams to guide and formulate agricultural nonpoint source policy within each state. One of the primary functions of the team will be to facilitate the implementation of the total resource management planning process in the state. The teams should consist of senior level representatives from federal and state agencies that are responsible for regulating or delivering programs to the agricultural community as well as representatives from local governments, the farming and environmental communities.

The Steering Committee recommends that the Policy Teams develop regional Tributary and Delivery Teams to carry out the strategies developed by the Policy Team in each predominantly agricultural tributary.

Discussion

In order to develop total resource management planning throughout the Chesapeake Bay Watershed, significant coordination and cooperation among the federal, state and local agencies that write plans or issue permits to farmers will be required. To maximize limited resources and to reduce conflicts, overlap and paperwork; the different agencies must develop mechanisms to work as teams to provide the farmer with planning services. This team approach to service delivery will require fundamental changes in agency and individual thought processes as the team approach goes beyond the traditional organization structure.

The resource agencies (federal, state and local) must perceive themselves as a team working for the betterment of the agricultural community and the Chesapeake Bay. A true team approach should include everyone from the front line service deliverers to the heads of the agencies. By bringing all the players together, the agencies that assist or regulate the farmers can ensure the farmer that they are providing the best service possible. As service to the farmer improves and farmers adopt more bmps, agriculture's contribution to the pollution load of the Chesapeake Bay should decrease.

Policy Team. A team approach to agricultural resource management must begin with a commitment from the heads of the agencies to work together to address agricultural nonpoint source issues. A Policy Team can provide the high level coordination that is necessary for the success of each state's efforts to develop total resource management. It is also appropriate that the federal government establish its own interagency policy team to oversee federal agricultural and water quality programs. At a minimum, the team should consist of the Secretaries or Commissioners of Agriculture, Environment and Natural Resources; the heads of each jurisdictions lead nonpoint source agency; the directors of the Agricultural Stabilization and Conservation Service, the Extension Service and the Soil Conservation Service; the director of the land grant institutions; and local agricultural leadership in the state. Other members should include representatives from the farming community, the private sector, agricultural and environmental organizations.

The role of the Policy Teams will be to refine the Executive Council's objectives for agricultural nonpoint source pollution in the Bay to fit the individual needs of the state. The teams will help resolve conflicts among the participating agencies. One way to prevent conflicts is through interagency crosstraining and team building programs. As the Teams shape agricultural nonpoint source policy in the states, they also need to promote and develop strategies for their agencies to implement the total resource management concept throughout the state.

Tributary Teams. Based in the primarily agricultural watersheds, the Tributary Teams provide oversight, facilitate the implementation of public policy by the local districts and agencies and inventory the relevant resource information within the watershed. Working with the local districts and agencies to coordinate a range of programs within the watershed, including costshare, educational programs, demonstration projects, etc., will be a fundamental role of the Tributary Teams. As a Team acquires more knowledge of the specific tributary, the Team can target resources to the areas with the greatest needs.

Local involvement is critical. Local leadership along with the agencies should decide which individuals are best suited to the Tributary Teams. A strong relationship with the agricultural community is important to the success of the Team. To build these relationships, it is recommended that the Teams include representation from local agricultural organizations. As the states develop the Tributary Strategies mandated by the 1992 Amendments to the Chesapeake Bay Agreement, the local agricultural Tributary Teams should provide an accurate picture of agriculture's contribution to nutri-

² For a detailed discussion of the team approach, refer to the report of the Intergovernmental Subcommittee.

ent loadings. These agricultural teams should be an integral part of the states overall tributary efforts.

Delivery Teams. The ultimate success of agricultural programs is directly related to the delivery of conservation plans to farmers. Establishing local delivery teams among federal, state and local service providers will enhance service to farmers and result in improved water quality for the Bay. To increase the adoption of best management practices, farmers need to receive reliable, noncontradictory information from the agencies. Improved cooperation, coordination and communication among the local planning, agricultural and environmental agencies is required. The front line individuals must see themselves as part of an overall delivery system rather than as individual agencies. Developing a locally based team approach among the federal, state and local agencies is essential to providing the agricultural community with total resource management planning.

IV. The Agricultural Initiative's Steering Committee

The Steering Committee recommends that it continue to advise the Bay Program on agricultural nonpoint source issues; to monitor the implementation of the recommendations of the Initiative; and to facilitate the efforts of the three state policy teams. The Steering Committee will report to the Executive Council at its annual meetings.

Restructuring agricultural programs in the Chesapeake Bay region to restore the health of the Bay and meet the nutrient reduction goals will require collaboration from the highest levels of government and agricultural agencies on a regular basis. The Agricultural Initiative represents the first time in the Bay Program that the Secretaries or Commissioners of Agriculture, Environment and Natural Resources from Maryland, Pennsylvania and Virginia and federal officials came together to develop an environmental agenda for agriculture. Combining the talents of the cabinet Secretaries, directors of environmental and farming organizations, representatives from the Governors' offices, agricultural research institutions; the Environmental Protection Agency, the National Oceanic and Atmospheric Administration, and the U.S. Department of Agriculture, the Steering Committee provided guidance to the overall Initiative and helped formulate agricultural policy for the Bay region. In addition a representative, a from the state legislatures should be added to enhance the discussion of the vital budgetary and legislative actions that

impact agriculture in the states.

The Steering Committee is an important tool for developing agricultural nonpoint source policy and programs across the Bay. As an advisory body to the Bay Program, it can contribute greatly to the understanding of agriculture and the environment. The Steering Committee also will monitor the implementation of the Initiative recommendations in the Bay Program and the jurisdictions and report on an annual basis to the Executive Council.

V. The Nonpoint Source Subcommittee

*The Steering Committee recommends that the Nonpoint Source Subcommittee of the Chesapeake Bay Program add a workgroup to focus on issues related to agricultural nonpoint source pollution.*³

The Agricultural Nonpoint Source Workgroup's efforts should center on the following areas:

- ✧ Developing a compatible accounting and assessment system and surveys to track bmp implementation, the various plans used in the watershed, the number of acres that have plans and any other data the subcommittee determines to be relevant.
- ✧ Coordinating total resource management efforts throughout the Bay region.
- ✧ Working with the private sector to develop a certification program for the total resource management plan components.

VI. The Scientific and Technical Advisory Committee

The Steering Committee recommends that a Nonpoint Source (NPS) Workgroup be added to the Scientific and Technical Advisory Committee (STAC) of the Chesapeake Bay Program.

While the Workgroup may address all NPS related issues, agriculture should be a primary focus. One role of this workgroup would be to coordinate the development of literature synthesis and scientific consensus papers. The workgroup should prioritize the topics recommended for consensus efforts by the Research Subcommittee and seek funding for at least five consensus projects per year. Working through STAC, the Workgroup will provide technical support to the NPS Subcommittee and other Bay Program activities. The

³ Based on the recommendations of the Initiative, the NPS subcommittee added an Agricultural Workgroup at its May 1993 meeting.

Workgroup also will coordinate regular agricultural NPS research conferences for scientists in the Bay watershed. The role of these conferences is to communicate new research findings, improve coordination among scientists, encourage collaborative projects and serve as a forum for development of scientific consensus on specific topics. It is recommended that the workgroup be composed of four scientists from each state, with at least three being agricultural scientists involved in NPS research.

The Steering Committee recommends that the Nonpoint Source Workgroup of STAC work with the jurisdictions to improve and coordinate communication of research findings to agency managers and policy makers.

Communication of scientific information among scientists and policy makers needs to be improved. Extension, Soil Conservation Service and other technical education and assistance groups in each jurisdiction should assign responsibility for communicating technical information to policy makers and selected scientists/specialists. This responsibility should be a clear part of individual job descriptions. In addition, regular scientist - policy maker forums should be established in each state at which brief policy oriented updates on new findings are presented. Concise policy or program oriented executive summaries should be required for all NPS research projects. These summaries should be published separately from the project report and distributed to policy makers. It may be advantageous for these summaries to be written and distributed by those charged with scientific communication rather than by the scientists conducting the research.

VII. The Citizens Advisory Committee

The Steering Committee recommends that the representation of the agricultural community on the Citizens Advisory Committee increase to reflect the new emphasis on agriculture in the Bay restoration effort.

While farmers are being asked to do more to protect the Bay, their representation in the Citizens Advisory Committee (CAC) and other Bay Committees has not increased to reflect this new focus. Currently one full time farmer sits on the CAC. Therefore, it is recommended that CAC adopt as a goal increased representation from the agricultural sector in each state. These new members may be individual farmers, representatives from agricultural organizations such as the Farm Bureau or agribusiness.

VIII. Coordinated Funding⁴

The Steering Committee recommends that funding be increased for NPS research on new nutrient reduction technologies and an assessment of the technologies effectiveness.

Currently, about one percent of total Bay Program funds is directed toward NPS research on all topics. The 1991 Nutrient Reevaluation and 1992 Amendments to the Bay Agreement both emphasize the need to explore new technologies for NPS nutrient reduction. While the focus of the Bay Program should clearly remain on implementation, it is apparent that additional resources are needed to develop new technologies for implementation.

The Steering Committee recommends that the jurisdictions coordinate other funding sources, such as those available under Section 319 (Clean Water Act), Coastal Zone Management and the Experiment Station Hatch Act with Bay Program funds to optimize efforts to develop, demonstrate and/or implement new NPS technologies.

Several sources, other than Bay Program funds, could be used to support development of new technologies. The jurisdictions and EPA should coordinate requests for proposals for these funds with the NPS research, demonstration and implementation needs of the Bay Program. Additional flexibility in the use of these funds to support NPS research in the Bay states should be explored. Collaborative projects by scientists in the Bay states provide better research results over the region in a shorter time period and should be encouraged by the funding agencies. Part of the Agricultural Experiment Station regional research funds should be directed towards collaborative research efforts in the Bay watershed for new NPS nutrient reduction technologies.

IX. The Private Sector

The Steering Committee recommends increasing the private sector's involvement in the Bay Program and agricultural nonpoint source pollution prevention.

To develop and provide the agricultural community with comprehensive solutions, the private sector must play a key role. Governmental agencies do not have the available personnel or financial resources to develop and implement everything that will be needed to

⁴ For a detailed discussion of research issues, refer to the report of the Research Subcommittee.

reduce agriculture's contribution to the nonpoint source pollution load. However, by forming partnerships with the private sector, the jurisdictions can achieve their planning and nutrient reduction goals. In the future, certification programs for TRM plan components as developed by the NPS Subcommittee's Agricultural Workgroup will allow the private sector to write plans thereby increasing the planning resources available to the farmer.

X. Urban Grounds Management

The Steering Committee recommends that the Bay Program develop certification programs for urban grounds management agencies and private companies in the total resource management plan components.

Agricultural agencies play an important role in providing guidance for the management of lawns, golf courses, etc. in developed areas. To meet the nutrient reduction and other goals of the Chesapeake Bay Agreement, nonpoint source pollution from these sources must be addressed. The agencies and companies involved should follow the same guidelines that the agricultural community uses in the application of fertilizers and pesticides. A certification program for urban nutrient and integrated pest management based on the guidelines established for agriculture needs to be developed. Once these two TRM components are developed for urban areas, others may be added later.

XI. Farmer Award Program

The Steering Committee recommends that the Executive Council develop an award to recognize annually one farmer from each jurisdiction who has implemented a significant number of the recommendations in his/her plan to control nonpoint source pollution from his/her farm and is actively involved in state efforts to manage agricultural NPS pollution.

Recognizing farmers who are working to protect the Chesapeake Bay will promote the value of environmental practices on the farm and the proactive role of farmers in protecting the Bay to the agricultural community and the public. Many farmers believe that the public has not acknowledged the beneficial steps they have taken to reduce nonpoint source pollution. Recognition of farmers at the Executive Council's meetings will spotlight the actions that farmers are taking to protect the Bay.

The Steering Committee recommends that each jurisdiction develop a recognition program for farmers who are implementing nutrient management and conservation plans.

In addition to Baywide recognition of outstanding farmers, local recognition is necessary. Each jurisdiction should develop district based awards programs for farmers who are implementing nutrient management and conservation plans. Plaques saying "Chesapeake Bay Friendly Farmer" hung near the mailbox could provide local recognition to an environmental sensitive farmer. This recognition should be promoted throughout the community through agricultural, environmental and civic organizations.

