REPORT OF THE

Chesapeake Bay Commission

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

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CHESAPEAKE BAY COMMISSION

CHESAPEAKE BAY COMMISSION
RESPONSE TO VIRGINIA GENERAL ASSEMBLY
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CHAPTER I - Background and Overview

Introduction

Nonpoint sources (NPS) of pollution have been identified by the EPA Chesapeake Bay Program and others as contributing to the deterioration of water quality and habitat suitability within the Chesapeaake Bay system. Nonpoint sources may be described as those which cannot be traced to a single, discreet point of origin. These include soil erosion and resultant sedimentation from agricultural lands and areas under development as well as stormwater overflow in urban areas and atmospheric precipitation. Causes include both natural forces such as wind and rain and man-induced activities such as cultivation and construction.

Sediment, a major component of nonpoint source pollution, is significant both as a pollutant itself and as a carrier of pollutants. It decreases water clarity and light penetration and may smother communities of benthic organisms and submerged aquatic vegetation. Sediment also serves as a carrier of nutrients and toxic substances from farmlands and urban surfaces to the waters of the Bay. The relative contribution of nonpoint sources to total nutrient loading to the Bay watershed is largely dependent on rainfall conditions. Under average rainfall conditions, however, nonpoint sources contribute 39 percent of the phosphorous load and 67 percent of the nitrogen load on a Bay-wide basis. Agricultural lands are by far the dominant source of NPS-originating nutrients entering the Chesapeake Bay. Nutrient and sediment loads also vary widely among individual river basins and watersheds.

Nonpoint sources of pollution have not traditionally received the same level of recognition, emphasis, or funding as have point sources. Important federal legislation enacted during the late 1960's and early 1970's was aimed primarily at the reduction or eradication of the most visible, or point source, discharges of pollutants to the system. Thus, the sewage treatment plant construction grants program and the NPDES permit requirements have formed the cornerstone of the cooperative effort to reduce the level of contaminants entering the Chesapeake Bay. Efforts to control nonpoint sources of pollution have traditionally been considered a function of agricultural or soil conservation agencies. Until recently, emphasis and programs at both the federal and state levels have not been targeted to water quality but have, rather, been designed merely to prevent erosion in an effort to avoid the loss of productive top soil. Research conducted over the past decade, however, has brought scientists, managers, farmers and other Bay users to the realization that runoff(urban as well as agricultural) and sedimentation eventually find their way into creeks and streams and are therefore intimately related to the water quality of the Chesapeake Bay.

The EPA Chesapeake Bay Program, conducted over a six-year period at a cost of some twenty-seven million dollars, has discovered and compiled a great deal of information concerning the Bay and its resources. This study and its implications have provided the impetus for significant and continuing efforts on the part of all states in the region to halt the continuing degradation of the water quality of the Chesapeake Bay and to restore the quality and productivity of the Bay to former levels. By its very nature and design, the

EPA study was somewhat limited in scope. It did not, for instance, specifically address sediment *per se*; it did, however, describe nutrient enrichment as a major problem in the Bay and identified urban and agricultural runoff as the major contributors to that problem.

Problems associated with sedimentation and other nonpoint sources of pollution were addressed in more specific terms by several of the workshops held in preparation for the 1983 Chesapeake Bay Conference. The Habitat Management Workshop identified sediment control as a top priority, and recommended that best management land use practices, including stormwater retention programs as well as agricultural practices, be required in all major Chesapeake Bay watersheds to reduce the rapidity of runoff and the amount of nutrients and sediment released to the system. The Water Use Activities Workshop addressed sediment primarily as a product of dredging activities. Sediment quality and quantity are extremely important in assessing the impacts of any dredging operations. Finally, the Land Activities Workshop identified sediment as a major pollutant and defined the basic problem as follows:

> Large amounts of sediment reach the waters of the Chesapeake Bay and its tributaries, having a detrimental effect on the quality of habitat for living organisms, reducing water clarity, and speeding the rate of channel silting (and thus the necessity for dredging).

Clearly, many organizations and individuals have come to consider nonpoint sources of pollution as important contributors to the overall water quality problems facing the Chesapeake Bay region. Prior to 1984, Virginia had enacted or supported two major programs in an effort to combat nonpoint sources of pollution:

(1) an Erosion and Sediment Control Law, and

(2) the Agricultural Pollution Control Program.

Virginia's Erosion and Sediment Control Law was enacted by the General Assembly in 1973. It grants the Soil and Water Conservation Commission the responsibility for developing guidelines, providing assistance to localities, and approving local plans for controlling erosion. The SWCC was to develop a program for any locality which had not adopted an appropriate ordinance within one year of the effective date of SWCC guidelines. Forty-four Soil and Water Conservation Districts throughout the Commonwealth provide technical assistance to the localities in administering their programs. To date, 95 counties, 41 independent cities and 35 towns have enacted erosion and sediment control ordinances. Agricultural activities are exempt from Virginia's sediment control law.

The principal focus of Virginia's agricultural pollution control program has been guided by the Section 208 area-wide waste treatment management provisions of the Clean Water Act (P.L. 92-500, as amended). Virginia's 208 management plan has resulted in the development of a series of Best Management Practices Handbooks designed to control nonpoint source pollution in five categories, one of which is agriculture. The Soil and Water Conservation Commission is the lead agency for the development and implementation of

agricultural best management practices while SWCDs are the lead agencies at the local level. The State Water Control Board, however, retains overall responsibility for the direction and coordination of the program. In its 208 planning process, Virginia, like most states, has relied principally on the voluntary compliance of land owners and users with recommended best management practices.

During 1983, the Chesapeake Bay Commission examined thoroughly the nonpoint source pollution control programs of states in the Chesapeake Bay drainage basin. The Commission found that sound erosion and sediment control standards had been developed at the state level in Virginia and that local governments and SWCDs were generally doing an adequate job of approving effective sediment control plans. Throughout the state, however, enforcement of approved plans appeared to be a serious problem. No absolute documentation exists to verify the extent of the enforcement problem in Virginia, but two state-wide reviews conducted since 1976 have identified inspection and enforcement inadequacies as significant obstacles to the effective administration and implementation of nonpoint source pollution control programs within the state. Manpower limitations were pointed out in both studies as significant causative factors.

As a result of its review and deliberations, the Commission made several recommendations to the General Assembly in its 1984 Annual Report. Among them was the following:

> A task force should be created to review and evaluate the effects of staff levels currently employed and assigned by Conservation Districts and local governments to the implementation and enforcement of the Erosion and Sediment Control Law in Virginia.

The Commission recommended that specific tasks assigned to the group should include:

- an assessment of the adequacy of existing and proposed staff at the local and SWCD levels to effectively address nonpoint source pollution control programs including
  - -- implementation of the state Sediment Control Law,
  - -- implementation of the state 208 Agricultural program,
  - -- provision of technical assistance to farmers within critical or priority watersheds as determined by the U.S. Environmental Protection Agency, the Virginia State Water Control Board, and the Virginia Soil and Water Conservation Commission.

- an assessment of the role and responsibility of state government in providing adequate, trained staff to implement urban sediment control and agricultural Best Management Practices.

- an assessment of the role and responsibility of local government in providing for adequate, trained staff to implement these programs.

- an examination of potential revenue sources to provide such staff and training.

Largely as a result of new information which was generated and publicized by the EPA Chesapeake Bay Program, and following recommendations made at the 1983 Chesapeake Bay Conference, the 1984 Session of the Virginia General Assembly and the executive agencies acknowledged the significance of nonpoint sources in several important ways. As a major element of its 1984-1986 Chesapeake Bay Initiatives package, the legislature appropriated $2.5 million for an Agricultural Pollution Control Program to be administered by the Soil and Water Conservation Commission. The goal of the program is to reduce the amounts of sediment, nutrients and toxic substances reaching the state's waterways by providing cost share grants and technical assistance to farmers agreeing to implement specific agricultural best management practices. It is hoped that the availability of these grants will provide members of the agricultural community sufficient incentive to adopt sound soil conservation and management practices. In the area of urban nonpoint source pollution control programs, the state has appropriated $750,000 for the 1984-86 biennium. A primary objective of this element of the program is to demonstrate and monitor the effectiveness and practicability of certain innovative urban BMPs. An initial demonstration project will include the construction of a one-acre porous paved parking lot, grassed waterway, and infiltration trench at a Northern Virginia location. It is proposed that stormwater runoff from the pavement project will be monitored for water quality and quantity and that results will be compared to the runoff from an adjacent conventionally-paved parking lot.

These programs, and others, represent bold and innovative steps for Virginia and demonstrate the commitment of the Commonwealth to the Chesapeake Bay clean-up effort. It is too early to assess the effectiveness of these new programs but they do seem to address some long-acknowledged problem areas and, if administered and implemented efficiently, they should significantly reduce nonpoint source pollution in the state. Clearly, these efforts must be continuously evaluated and monitored to ensure that they are assisting the state in achieving its goals of improved water quality and living resources productivity.

In response to the findings and recommendations of the Chesapeake Bay Commission, the 1984 General Assembly also enacted House Joint Resolution 137. This Resolution, attached as Appendix A, recognizes the significant contribution of pollution from nonpoint sources to deteriorating water quality conditions in Virginia and requests the Chesapeake Bay Commission to assess the adequacy of staff resources within existing state and local programs

designed to deal with all aspects of nonpoint source pollution control in the state. This document represents the Chesapeake Bay Commission's response to H.J.R. 137.

While the primary focus of the study was the adequacy of staff resources dedicated to NPS pollution control, research indicated many other strengths and weaknesses of existing erosion and sediment control and agricultural conservation programs. Where appropriate, these observations have been included in the report. In order to evaluate Virginia's programs comparatively, relevant information from several neighboring states has been compiled and included. Additional issues raised by the study which are less directly concerned with manpower needs are documented in the Chesapeake Bay Commission's "1984 Annual Report to the General Assemblies of Maryland and Virginia".

State and Local Resources Available for Implementation of the Erosion and Sediment Control Law in Virginia

The State Erosion and Sediment Control Program in Virginia is an example of a state law implemented by local governments with limited oversight by a state agency. The Virginia Soil and Water Conservation Commission is responsible for carrying out the Program at the state level. Forty-four Soil and Water Conservation Districts, 95 counties, 41 independent cities, and 35 towns are responsible for carrying out the law. State responsibilities include:

1. Establishing erosion and sediment control standards to be used by local governments, Districts and other state agencies.

2. Providing information and technical assistance to local governments, Districts, and other state agencies.

3. Reviewing local ordinances to ensure that they meet the requirements of state law.

4. Conducting a voluntary training program in erosion and sediment control techniques for individuals involved in implementing and enforcing the law, as well as engineers, developers and others who must comply with the law.

5. Developing a program for local implementation where local governments fail to do so; reviewing plans involving two or more local jurisdictions and reviewing decisions of Districts upon appeal.

In addition to these responsibilities, the Soil and Water Conservation Commission is authorized to seek legal action through the Office of the Attorney General to enforce compliance with the law.

Local governments or Districts must carry out the following activities:

1. Adopt local ordinances in compliance with the state law, which requires an approved erosion and sediment control plan prior to the issuance of grading and building permits.

2. Review and approve the plans.

3. Monitor and inspect construction sites for compliance with the plan.

4. Take legal action, through the Commonwealth's Attorney, in cases where compliance cannot be voluntarily obtained.

Districts are the responsible jurisdiction unless the county, city or town adopts its own program. In fact, most local governments have adopted their own programs and Districts are carrying out very few programs.

The State Soil and Water Conservation Commission has a Technical Services unit consisting of one clerical and five professional positions which is responsible for the Erosion and Sediment Control Program. The unit is composed of two water pollution control specialists and two water control engineers, under the direction of a water control engineer. The unit receives an annual appropriation of $143,000. Until 1984, this unit was solely responsible for the Erosion and Sediment Control Program. With the adoption of the Chesapeake Bay Initiatives in 1984, the unit gained the additional responsibility of overseeing the state's Agricultural Pollution Control Plan for the Chesapeake and Chowan Basins. Total staff time available for the Erosion and Sediment Control Program, therefore, dropped from 5 F.T.E. to 2.5 F.T.E. during FY '84.

One result of this shift in personnel responsibilities has been a reduced emphasis on state oversight of local erosion and sediment control programs. By 1983, local jurisdictions and Districts had adopted programs and the state staff had reviewed the programs "on paper" to ensure compliance with the law. Additionally, stormwater standards had been developed and incorporated into many local programs. The state staff had then begun an in-depth review process designed to determine whether local programs were being effectively carried out on the ground as well as on paper, and to give assistance to local jurisdictions in improving the operation of their programs. This review process has been curtailed due to additional responsibilities assigned to Soil and Water Conservation Commission personnel.

The state has never provided any financial assistance to local governments to carry out erosion and sediment control programs. Districts have received a small amount of funds to assist in hiring personnel (usually a part-time clerical employee) and may now have additional funding available through the Chesapeake Bay Initiatives. The state requires that each local jurisdiction name an individual or agency as a "plan approving authority" and as a "permit issuing authority". No statewide standards or guidelines concerning the number or qualifications of individuals needed to implement programs have been established; this decision is left entirely to the local jurisdiction. Most jurisdictions have not assigned a single individual to work full time in the erosion and sediment control program. In most cases,

local staff involved both in plan review and inspection and in monitoring and enforcement must divide their time among several local programs. It is impossible to quantify the actual number of F.T. E. or funding being dedicated to the program at the local level. Local staffing and training levels are discussed more thoroughly in Chapter III. Local governments and Districts may charge a fee of up to $300 per plan reviewed to help cover the costs of the program. Most jurisdictions currently charge a fee, but few local governments indicated that fees offset a significant proportion of program costs.

State staff resources available for the implementation of the agricultural program are identical to those available for the Erosion and Sediment Control Program. Thus, 2.5 F.T.E. and $71,500 are available annually. In addition, four field representatives and one district coordinator are employed by the Soil and Water Conservation Commission to aid in District operations. Through the cooperation of other state and federal agencies, additional support is available through the Virginia Forestry Division, the Virginia Cooperative Extension Service, the U.S. Soil Conservation Service, the U.S. Agricultural Stabilization and Conservation Service and the U.S. Environmental Protection Agency. It is not possible to quantify the number of full time equivalents available through these cooperative efforts.

Soil and Water Conservation District staff and U.S. Soil Conservation Service personnel working within the Districts participate in the program. District personnel are largely responsible for handling the distribution and monitoring of cost share funds within their district, and with conducting educational and technical assistance activities. Staff and financial resources available to Districts are discussed more thoroughly in Chapter III. Funds provided through the Chesapeake Bay Initiatives add 27 new part-time clerical positions. Prior to the adoption of the Initiatives, the Soil and Water Conservation Commission had provided approximately $300,000 per year to assist the Districts in funding 8 full-time technical positions and approximately 40 part-time clerical positions. There are 250 SCS personnel assigned to Soil and Water Conservation Districts throughout the state.

Means and Criteria for Assessing the Adequacy of Nonpoint Source Pollution Control Programs

One of the most difficult tasks is to define or determine what should be considered "adequate" in terms of implementing the state's two major nonpoint source pollution control programs. Certainly, if contributions from nonpoint sources are reduced significantly over the next several years, implementation may be deemed adequate. Given limited resources and information, however, a less direct measurement of program adequacy is the best assessment which can be attempted at this time. In terms of the sediment control law, staff must be available to perform the following tasks, at minimum:

1. Expeditious review and approval of effective erosion and sediment and stormwater control plans;

2. Frequent (at least weekly) field inspections to ensure compliance with plans;

3. Administrative and legal support to follow through on enforcement actions.

It seems reasonable to suggest that each local jurisdiction should have at least one individual whose primary task is the implementation of the erosion and sediment control law, and that this individual have an appropriate educational background or direct experience in erosion and sediment control methods.

At minimum, all individuals involved in plan review and field inspection should have taken the Soil and Water Conservation Commission sponsored training course as a supplement to technical training or experience in soil science, engineering, design or construction. The number of plan reviewers and inspectors required, of course, would depend on the level of construction activity occurring in a particular area. Because of the variation in sizes and duration of construction projects and the distances between sites, it is impossible to determine any absolute formula which would relate, for example, the number of reviewers and inspectors to the number of building permits issued. The only real measure of whether plan review and approval and field inspection and monitoring personnel are adequate is whether these tasks are actually being conducted with adequate frequency and according to accepted standards. This would require an independent in-the-field assessment by trained observers and was beyond the scope of this study.

Most local governments were unable to provide a figure on the number of F.T.E.s devoted to implementation of the erosion and sediment control program. Few have individuals whose sole responsibility is erosion and sediment control; generally, a local government has one or more employees who divide their time between reviewing several types of plans or inspections for a variety of permits.

Determining the number of personnel necessary to effectively administer the state's agricultural nonpoint source programs is, perhaps, made even more difficult by the fact that the program is relatively new and quantitative statewide implementation goals have not yet been established. Many states, for example, have set a goal of establishing a conservation plan for every farm within a certain number of years. If a goal of preparing and updating a conservation plan for every farm in Virginia were established, approximately 270 individuals would be required, assuming that conservation planning was their only task. There are currently more than this number of individuals available through the U.S. Soil Conservation Service and state and locally funded positions. Many of these individuals, however, are working on other programs (such as urban erosion problems), or are administrative or clerical. Many of the state and locally funded positions are part-time.

Virginia has not, however, set a goal related to the number of conservation plans to be developed. Instead, the Soil and Water Conservation Commission is targeting funding assistance, in terms of both positions and cost share funds, to certain watersheds and, within those watersheds, to certain farms. In these areas the program is emphasizing the establishment of individual practices rather than whole-farm conservation plan implementation. A reasonable definition of "adequate personnel" would therefore seem to be:

1. Sufficient personnel to respond to requests for assistance from land owners or occupiers on a continuing basis;

2. Sufficient personnel to contact and provide assistance to all owners or occupiers of target farms within priority watersheds, within a five year period.

Most Soil and Water Conservation Districts responding to the survey questionnaire indicated that they did not have sufficient personnel to respond to requests for assistance; almost none indicated that they were able to carry out outreach efforts to contact farmers who were not currently participating in conservation programs. These responses predate the initiation of the Commonwealth's new Agricultural Pollution Control Plan for the Chesapeake and Chowan Basins. The new program will affect personnel needs in several ways. On one hand, it will generate additional requests for assistance and require that more educational and outreach efforts be initiated. On the other hand, it will provide additional personnel to concentrate on these same issues. It is simply too soon to ascertain whether the number and distribution of new positions will be sufficient to meet the existing and newly generated needs. Further, because of the newness of the program it is not possible to quantify, at this time, the number of farmers to be contacted or the number of acres to be included in the state's priority watershed areas.

CHAPTER II - Comparison of State Programs

An attempt was made to compare the types of erosion and sediment control and agricultural conservation programs conducted by other states with those in Virginia, and to compare the level of resources which other states are dedicating to these programs. The Commission chose, for the purpose of comparison, to review the state laws and programs in effect in several mid-Atlantic and southern states. These included all those states which have some land area draining into the Chesapeake Bay - New York, Pennsylvania, Maryland, Delaware, West Virginia and Virginia - as well as the adjoining coastal states of New Jersey, North Carolina, South Carolina and Georgia. In addition, documents providing an overview of programs on a nationwide basis were reviewed.

Because of the variety in sizes of states, the relative importance of agriculture, the rate of development, the number of local subdivisions, and the ways in which budgets and personnel are assigned, it proved difficult to make a meaningful comparison in the "level of effort" which individual states provide for these programs. Nonetheless, some trends can be seen. Table II-1 shows the number of state and locally funded positions assigned to Soil and Water Conservation Districts in each of the states as of January 1, 1983 (according to the Council of State Governments). These figures are given on a per acre of farmland, and a per farm basis for comparison purposes. (This does not mean that personnel are actually assigned in this manner.) Table II-2 provides the same information for federally funded SCS personnel.

Virginia has the eleventh highest average rate of soil loss in the United States, and the highest rate of the six Chesapeake Bay states, as shown in Table II-3. Table II-1 shows, however, that Virginia, while ranking in the average range nationally, provides the lowest or next to lowest degree of effort among the six Chesapeake Bay states in terms of personnel allocated for these programs. Federal distribution of personnel appears to echo that of the states. Thus, federal resources do not offset low levels of state effort, but, rather, tend to exacerbate the discrepancy.

Table II-4 shows the funding and staff levels for construction and agricultural nonpoint pollution control programs, as well as the state funding and state funded positions made available to Soil and Water Conservation Districts. Amounts of cost share funding for agricultural Best Management Practices (BMPs) programs are also shown.

Nationwide, approximately twenty states have instituted an Erosion and Sediment Control Law for construction activities. Many of these laws were based on a model law presented at an environmental conference in 1970, and are, therefore, quite similar in basic format. Generally, all state laws require the following:

(1) development of standards for sediment and erosion control practices by a state agency,

(2) approval of erosion and sediment control plan prior to issuance of building or grading permits by local government, and

TABLE II-1

State and Locally Funded Positions for Erosion Control

(Information derived from Book of the States 1984-1985, Council of State Governments, Ironworks Pike, P.O. Box 11910, Lexington, KY, Vol 25, 1984. pp 482-487 and p 466)

Conservation District Employees* per 1000 Farms

State	Number	National Rank Order
** Delaware	9.0	1
New Jersey	7.1	3
** Maryland	6.0	4
** New York	5.9	7
** Pennsylvania	2.4	19
South Carolina	2.0	23
North Carolina	1.5	28
** Virginia	1.5	29
Georgia	.5	50

Conservation District Employees* per 100,000 Acres Farmed

State	Number	National Rank Order
New Jersey	5.8	2
** Delaware	4.4	3
** Maryland	3.5	4
** New York	2.6	6
** Pennsylvania	1.6	9
North Carolina	1.2	12
South Carolina	1.2	14
** Virginia	.9	17
Georgia	.2	41

* These figures include part time employees but not seasonal and temporary employees.
** States in the Chesapeake Bay drainage area.

TABLE II-2

Distribution of U.S. Soil Conservation Service Personnel

(Data provided by the U.S. SCS and Book of the States 1984-1985, Council of State Governments, Ironworks Pike, P.O. Box 11910, Lexington, KY, Vol. 25, 1984. p. 466)

Employees per 1000 Farms

State	Number	National Rank Order
Delaware	17.0	8
West Virginia	11.1	16
New Jersey	10.6	17
Maryland	6.6	27
Georgia	6.3	29
New York	6.0	33
South Carolina	5.7	37
Pennsylvania	5.0	38
Virginia	4.3	39
North Carolina	3.1	48

Employees per 100,000 Acres Farmed

State	Number	National Rank Order
New Jersey	85.9	5
Delaware	82.0	6
West Virginia	53.1	8
Maryland	37.8	10
Pennsylvania	33.7	11
South Carolina	30.5	14
New York	27.1	16
Virginia	26.9	17
North Carolina	24.6	19
Georgia	20.1	26

TABLE II-3

Soil Loss Rates From Water Caused Soil Erosion

State	Tons/Acre/Year	National Rank Order
North Carolina	7.64	9
Virginia	6.61	11
Georgia	6.58	12
New Jersey	6.54	13
Maryland	6.08	15
Pennsylvania	5.49	17
New York	4.85	19
South Carolina	4.77	20
West Virginia	3.65	23
Delaware	3.49	26

TABLE II-4

State Contributions for Soil Conservation Programs

State	State Budget for Erosion and Sediment Control Law	State Level Soil Conservation Staff (Agriculture & Construction)	State Funded Staff in Districts	Requirements for Conservation Plans on Farms	Cost Share Funds Available
NY	N/A.	No figure available	Up to $10,000 per District on 50/50 matching basis. 57 F.T.E.	All farms required to have plan by 1987. Penalty for noncompliance.	None
NY	No figure available	6	$375,000/year on 50/50 matching basis. 50 F.T.E.	No requirement	$1.2 million annual appropriation FY '85
PA	No figure available	9	$750,000 on matching basis. 171 F.T.E.	Plan required by law, penalties available under Water Pollution Act.	$1 million FY '84; FY '85 appropriation anticipated.
MD	$711,000	8 full time, plus 50 inspectors part time on erosion and sediment control	$1.75 million, no match required. 75 F.T.E. 46 technical 11 managerial 12 clerical 11 additional positions requested for FY '86.	No requirement but state policy that every farm shall have a plan.	$5 million in FY '84; $2 million in FY '85; additional funds to be requested as needed.
DE	$55,000	1	$180,000 to Districts on a 50/50 matching basis.	Plan required by law unless cost share funds not available.	$150,000 in FY'85; first year allocation.
VA	$71,500	5 F.T.E.	Approximately $675,000 27 F.T. E. technical 30 F.T.E. clerical 57 total	No requirement	$1.5 million for 84-86 biennium, i.e., $750,000 per annum.
NC	$480,000	64 (includes soil survey)	$2,000/District on 50/50 matching basis. 100 part time positions.	No requirement	$2 million FY '85 appropriation
SC	No figure available	4 full time, 10 field inspectors part time on erosion	No figure available	No requirement	$600,000 requested for FY '85
GA	No figure available	4 full time, 10 field inspectors part time on erosion	No figure available	No requirement	None

(3) compliance with the state standards for state-controlled projected such as bridge and highway construction.

Despite these similarities, the laws vary in the ways by which authority to implement the law is distributed among the responsible state agency, local governments and conservation districts.

Almost every state has some kind of state-wide agricultural nonpoint source pollution control program which was developed under the auspices of Section 208 of the federal Clean Water Act. In most cases, however, compliance is completely voluntary for farmers. Eighteen states have implemented cost-sharing programs to encourage farmers to put Best Management Practices on their land and thus reduce agricultural pollution.

The following brief descriptions of state programs in other Chesapeake Bay and adjoining states give an indication of the range of programs in place nationwide. Table II-4 compares the level of effort in 9 states.

New York

In 1975 the state of New York enacted a law that requires every farmer to have a conservation plan for his farm. The law requires a review of each plan every five years. There are, however, no penalties for noncompliance. The Soil Conservation Service is responsible for developing conservation plans. Despite the lack of any enforcement mechanism, the goal of a plan for each farm within an agricultural district (a voluntarily formed district limiting development and providing tax incentives) by 1985, and for each farm in the state by 1988, is expected to be met. No cost share funding for agricultural Best Management Practices is provided. The state does provide up to $10,000 to each district on a 50/50 matching basis for personnel.

New York has neither a comprehensive statewide erosion and sediment control law nor a stormwater law. There is, however, a process for environmental quality review of all building projects over 10 acres in size by the Department of Environmental Control. Sediment and stormwater controls are imposed as conditions attendant to any permits required for the project.

Pennsylvania

Pennsylvania's Clean Streams Law (35 PA STATS. §§ 691.1 et. seq.) requires that a conservation plan be developed for any land disturbing activity, including agriculture. Enforcement actions have generally not been pursued against farmers, even though the authority to do so exists. The Bureau of Soil and Water Conservation and the Districts have been seeking voluntary compliance. The state has recently initiated a $2 million agricultural pollution control program ($1 million state funds, $1 million federal funds) in the lower Susquehanna (Chesapeake Bay) drainage basin to be used for cost share funding. This is expected to be at least a five year program with state and federal funds appropriated annually (federal funds are from the U.S. Environmental Protection Agency Chesapeake Bay Program). As a separate effort, the state increased assistance to Districts for manpower needs from $250,000 to $750,000 in 1983.

For construction activities, developments greater than 25 acres require a permit issued by the Department of Environmental Resources as well as a soil conservation plan. Conservation Districts are delegated various degrees of the Department's plan approval and permit granting authority, based on their level of expertise and the willingness of the District to become involved. Few of the Districts have been willing to take responsibility for enforcement activity, although many of the 66 districts do conduct compliance monitoring and refer violations to the state for action. The Districts which have accepted enforcement responsibility must rely on county or municipal lawyers to pursue cases. They have not found this a very satisfactory arrangement because of the low priority given to sediment control violations by the local governments.

A three year evaluation of the Pennsylvania Erosion and Sediment Control Program has recently been completed. Teams of individuals from the Bureau of Soil and Water Conservation, Conservation Districts, the Soil Conservation Service, local governments, and the construction industry spot checked 20 sites in each District. They found that less than 36% of the sites investigated had a plan available at the site; many contractors were unaware that a plan existed. Twenty-three percent of the sites had no plan filed. Of the sites which did have plans available, implementation was rated poor on 21.3% of sites, fair on 27.1%, good on 37.4% and excellent on 14.2%. In terms of water quality impacts, 45.9% had "inadequate" waterway protection; 72.1% had "some waterway damage" and 10.4% had "severe" damage.

Lack of manpower for inspection was cited as a primary cause for the poor implementation. There was a direct relationship between the number of inspections per site and the level of compliance. Poor understanding of sediment control techniques by contractors, and the need for better trained inspectors, were also significant causes.

New Jersey

New Jersey has a voluntary program of agricultural conservation planning with technical assistance provided through Conservation Districts. A cost share program was initiated in 1982. $1.2 million has been appropriated in FY '84. Funds will be requested annually "as needed" from a $50 million agricultural land preservation fund.

In New Jersey, Conservation Districts handle the major share of responsibility for the Erosion and Sediment Control Law. The Districts develop local programs, review and approve erosion and sediment control plans, and monitor construction projects in the field for compliance. Local governments issue building permits only after the District has approved a plan. Certificates of Occupancy may not be granted until the appropriate District has confirmed compliance with the plan. The Conservation Districts also monitor state projects for compliance.

The Districts charge fees for plan approval in amounts dependent on the size of the project. $1.1 million was generated through 2,800 permit applications in FY '84. This pays for a substantial part of the local program but not all of it. Most Districts, in addition to Soil Conservation Specialists, employ or retain a lawyer to assist in the enforcement effort.

The state may independently review Conservation District decisions and review the adequacy of local programs. To date this has not been done extensively.

Delaware

The Delaware soil erosion law requires conservation plans to be implemented on all farms, except where there is a slope of less than 6%, or where cost share funds are not available or the farmer cannot afford his share of needed projects. Because of the exemptions, enforcement of these provisions is limited to areas with extreme problems. The state initiated a cost share program in 1984 with an appropriation of $150,000.

Local governments are required to have erosion and sediment control programs for construction activities. Conservation Districts serve as the plan approval authority. While local governments (the permit issuing authority) are responsible for enforcement, localities generally contract with the Districts for monitoring and inspection.

The Division of Soil and Water Conservation is to evaluate local programs once every three years. The Division had an independent assessment performed by a consultant in 1984. Programs were generally found to be acceptable. If found unacceptable, the Division may take over implementation of the program.

Maryland

Maryland has an agricultural nonpoint source pollution control program which depends heavily on voluntary compliance. The state policy, however, is to pursue enforcement under the state water quality laws if all attempts at achieving compliance with conservation plans fail to produce results. The state created a cost share program in 1983 and has thus far appropriated $7 million for the program. In 1984, as part of its Chesapeake Bay Initiatives, 42 new positions were created in the field of soil conservation. These new soil conservation personnel will be devoted to farmland conservation planning. They are to be assigned to work as technical teams in defined high priority areas, focusing on reducing nutrient runoff to the Bay watershed. The state's goal is to have conservation plans implemented in all priority areas within five years and on all farms throughout the state within ten years.

Maryland became the first state to enact a statewide Sediment Control Program in 1970. The Law has since been amended several times. In Maryland, Conservation Districts serve as the plan approving authority and local governments serve as the permit issuing authority. The state Department of Natural Resources is responsible for developing minimum criteria and standards, reviewing and approving local ordinances, and evaluating local program effectiveness at least once every three years.

Until 1984 the state had no means of ensuring that local governments would adequately enforce their programs. Noncompliance rates were reportedly very high. State inspectors had concurrent authority to monitor and enforce the local programs, and each of six inspectors issued an average of 200 citations for noncompliance per year. In 1984 the Department of Natural

Resources was granted the primary enforcement authority for the Law. It will delegate enforcement authority only to those local governments which demonstrate that they can perform at an equal or superior level. As part of the initiative to assume the enforcement portion of the program, the state authorized 24 new positions and approximately $500,000 in new funds for enforcement activities.

North Carolina

North Carolina's agricultural nonpoint source and conservation planning program is voluntary. Three watersheds, including the Chowan, have been determined to be nutrient sensitive and $2 million in cost share funds for FY '85 are being targeted to these watersheds.

The state is responsible for carrying out a Sediment Pollution Control Act. The state may delegate authority to local governments. This authority has been delegated to 35 of 100 counties; however, two localities have had their delegations revoked. Where the local government is administering the program, the state reviews each program at least annually, and more often where problems are indicated. Local governments have both plan review and permit issuing responsibilities. The North Carolina Sediment Control Commission reviews plans for the remaining counties and for other state agencies.

South Carolina

South Carolina has a voluntary program for agricultural nonpoint source pollution controls. The Land Conservation Commission is requesting $600,000 in cost share funds for 1985.

The state's sediment and erosion control law is enabling; it is not mandatory that local governments adopt a program. Seven of 46 counties and one city have adopted ordinances which have been approved by the state Land Conservation Commission.

Georgia

Georgia's agricultural conservation program is strictly voluntary. No cost share funds are available.

The state has enacted an erosion and sediment control law which requires all local governments to have a program controlling land disturbing activities; to date 108 of 158 counties and 188 of 537 municipalities have adopted ordinances which have been approved. In those jurisdictions, the local government is the permit issuing authority and the Conservation District is the plan approving authority. Once a program is approved, the Conservation District and the State Soil and Water Conservation Committee oversee implementation; the Department of Natural Resources can revoke approval only on the request of the District and State committee. This has happened only once. The Department of Natural Resources is requesting authority to revoke approvals.

In the metropolitan areas, the Department of Natural Resources has a separate authority to revoke local program approvals based on the Metropolitan Streams Protection Act. Eight of 14 local governments have been served with notices of intent to revoke their certification. Six of the eight have complied with Department of Natural Resources conditions for continued certification; the remaining two are under review. Because the Department of Natural Resources is allotted 45 days for plan approval when it assumes responsibility for a county program, developers encourage local governments to take action to retain program approval. Local plan approval time is generally much shorter.

Summary

Most of the states queried have developed some form of agricultural pollution control program. Pennsylvania, New Jersey, Maryland, Delaware and North Carolina have initiated cost share programs; South Carolina anticipates doing so. Compared to the states which have initiated programs, Virginia's appropriation for cost-sharing of Best Management Practices is not overly large, being lower than that of Pennsylvania, New Jersey, Maryland and North Carolina. On the other hand, New York and Georgia have no cost-share funding. All programs, to date, have relied on voluntary compliance; even in those states where regulatory authority has been provided, such as Pennsylvania and Delaware, it has not been used against farmers.

Virginia's Erosion and Sediment Control Program varies from most others in two respects: (1) in most states, Conservation Districts are required to handle the plan review responsibilities, and (2) most states require by law an administrative policy that local programs be periodically reviewed to assess the degree to which they effectively implement their programs; generally the state agency has some authority to withdraw program approval or to impose some other sanction. These differences are significant in several regards.

Where Districts are involved in plan review, there are nearly always some technical personnel available to handle this function, even if it requires federally funded Soil Conservation Service personnel. Most states provide some support to their Conservation Districts. All states queried which give either permit issuing or inspection and enforcement duties to the Districts provide some support for these activities. No state queried provided funds directly to county, city or town governments for sediment control. Some of the more urban local governments in Virginia have retained the plan review function and provided trained staff people at local expense for this purpose. Others appear to have retained this function, but have not provided staff who are adequately trained in soil conservation technology. Expertise which might otherwise be utilized by these local governments is therefore not available. Increasing the level of trained staff available for implementation of the Erosion and Sediment Control Law could most efficiently be accomplished through the Districts; in many rural areas in Virginia, the rate of construction is not sufficiently great to warrant a full-time trained erosion and sediment control technician for each local government. If, however, local governments are operating their own programs, District staffing improvements would result only in indirect benefits.

Virginia is the only state among the 10 nearby states queried which has a mandatory Erosion and Sediment Control Program, but which does not have a regular process of review and evaluation of local implementation, as a matter of law or practice. In states where review of local programs has been conducted, serious problems have generally been found with enforcement of the law. Since no regular oversight of local program implementation is being carried out in Virginia, the extent to which these problems exist in Virginia is unknown. Such a review process was begun administratively by the Soil and Water Conservation Commission in 1982 but had to be curtailed because of additional demands placed on staff when the Agricultural Pollution Program was initiated.

CHAPTER III - Survey of Local Governments and Virginia Soil and Water Conservation Districts

Nonpoint source pollution control programs in Virginia are relatively decentralized, involving numerous personnel, programs and resources at all levels of government. In order to accurately describe existing conditions, then, it was clear that this study should be designed not only to collect and collate factual information but also to elicit the attitudes and subjective views of those individuals and jurisdictions responsible for actual program implementation and enforcement at various levels. It was determined that a survey approach would be the most effective and efficient means of ascertaining the opinions, perceptions and experiences of those most familiar with the intricacies of overall program implementation. To obtain as broad a perspective as possible, it was decided that the survey should be directed toward both the Soil and Water Conservation Districts and the local jurisdictions responsible for developing and enforcing local sediment control ordinances.

Accordingly, a questionnaire format was developed by Commission staff with the advice and assistance of personnel from the Virginia Soil and Water Conservation Commission. Two slightly different questionnaires were designed to reflect the distinction between the focus of programs carried out by the local areas and those administered at the District level. The District and local questionnaires are shown in Appendices B and C, respectively.

Questionnaires were distributed in mid-June of 1984 to all 44 Soil and Water Conservation Districts in the Commonwealth and to the 171 local soil and erosion control programs identified in the VSWCC 1983 "Directory of Local Erosion Control Programs". Thirty of the 44 Districts queried responded to the questionnaire for a response rate of 68.2% on a state-wide basis. Of the 28 Districts lying wholly or partly within the Chesapeake Bay/Chowan River drainage basins, 21 Districts returned the questionnaire, for a "Bay-wide" District response rate of 75%. Of the 171 questionnaires sent to local jurisdictions, 86 were returned for a state-wide response rate of almost 51%. Responding jurisdictions included 45 counties, 19 towns and 22 independent cities from throughout the Commonwealth. The percent participation was 47% of the counties surveyed, 54% of the towns and 54% of the cities. Sixty-five of the 86 local questionnaires returned were from the Chesapeake/Chowan drainage basins so 76% of the local respondents were from those areas which most seriously impact Chesapeake Bay water quality. The geographic distribution of responses to the questionnaire is depicted in Appendix D, Map 1. The map clearly shows that virtually all regions of the state are represented in the study. While the relative response rate from the Bay drainage area was greater, the actual responses to individual questions varied little on a statewide basis. This would indicate that many southwest Virginia localities share common problems and experiences with the localities of Tidewater in implementing nonpoint source pollution control programs. Questionnaire responses were complemented and corroborated by follow-up telephone and/or personal communications with randomly selected respondents and in cases where responses were unclear or ambiguous. The survey proved useful not only in assessing manpower and other resource needs, but also in identifying other perceived assets and inadequacies of existing programs.

Questionnaire Response and Analysis

The level of detail and accuracy contained in responses to the questionnaire varied tremendously among localities and Districts throughout the state. It is readily apparent that the nature and degree of perceived needs and problems varies widely across the Commonwealth; the degree to which state and local jurisdictions can respond to these problems and meet these needs depends largely on the level of sophistication of programs within an individual area. That level of sophistication, in turn, depends largely on the character of the area and the level of commitment to the program. Programs and commitments in a rapidly developing urban area such as Northern Virginia, for instance, may be entirely inappropriate for a relatively rural Southside Virginia jurisdiction. Manpower needs or needs for additional state assistance, however, may actually be greater in those smaller jurisdictions with less development and less active erosion and sediment control programs due to the priorities which local officials are forced to assign to a myriad of state-mandated but locally-implemented programs. Thus, the nature of the respondent's area/District must be considered in attempting to analyze the response. Not all recipients of the survey were able to respond to all questions. In some cases, the lack of a response seemed to result from a lack of knowledge, familiarity or experience with a given program area; in other instances, particular questions were simply not applicable or appropriate individuals were not available to answer them. This again points to the varying levels of development in and commitment to erosion control programs throughout the state.

Manpower Commitments and Needs

Only six of the 30 Districts responding (20%) indicated that they employed any full-time soil conservation personnel (exclusive of federal SCS employees). The maximum number of full-time soil conservation employees reported by any District was two. A large majority of Districts (86.7%) utilize "regular" or "occasional" part-time employees, most of whom are clerical personnel. These part-time positions are supported in most cases by a combination of state and local funds.

It proved impossible, through this survey, to develop any meaningful figure for an "average" or "median" number of local government personnel employed in implementing soil conservation programs on a state-wide basis. Follow-up interviews revealed that questions concerning this subject may have been poorly worded and/or poorly understood. Only 40% of the localities indicated that they employed full-time local government personnel in implementing soil conservation programs, but even this figure is probably misleadingly high. The assignment of one or more full-time employees to a given task or area in no way implies the assignment of an employee's full-time responsibility to that area. In the vast majority of localities, erosion and sediment control responsibilities are housed within the offices of existing agencies (e.g., building inspectors, zoning officers, town engineers, economic and community development officials, etc.) where erosion and sediment control regulations constitute only a small fraction of the workload. In many localities, a single individual is responsible for all such activities and may have additional duties as well. The administration of most local programs is assigned to clerical personnel with numerous other responsibilities. Again,

erosion and sediment control is frequently a minor portion of a broader permit-issuing authority such as that granted to the Office of the District Clerk.

Clearly, manpower dedication to soil conservation efforts by individual local governments is erratically distributed throughout the state. It is primarily the more urban and rapidly developing areas (e.g., Fairfax County, Virginia Beach) which have employed or assigned full-time professional staff to administer their programs. This is not surprising since erosion and sediment control responsibilities are generally assigned to existing development-oriented offices or agencies.

Permit processing time varies among localities, depending on workload and project size. Approximate processing time for an average erosion and sediment control plan is less than one week in 42% of the localities and less than one month in 90%. The remaining 10% report a processing time of 1-3 months and several localities were unable to respond as they had not yet processed any permits. Manpower assigned to actually processing permits, then, would appear to be adequate in most instances.

Most local programs are funded entirely by the local governments, though some do receive assistance (either financial or through the provision of in-kind services) from the state. Local governments are authorized to charge a permit fee to offset the costs of administering the erosion and sediment control program. Some localities have no permit fee while others charge a flat rate; still others pro-rate their permit fees on a per acre basis. The maximum fee which may be charged is $300, though no locality responding to the survey assessed a fee approaching this amount. The higher erosion and sediment control permit fees revealed in the survey are all qualified by the phrase, "not to exceed $150". Only 10% (9/86) of the localities responding to the survey indicated that revenues generated from permit fees were sufficient to cover the costs of administering the erosion and sediment control program in their jurisdictions. Administration of the erosion and sediment control program in most localities, then, amounts to a non-budgeted, "add-on" responsibility for local government personnel.

Eighteen of the 30 Soil and Water Conservation Districts responding (60%) reported that they were unable to accommodate the current demands for assistance and/or advice in one or more of the following program areas: implementing agricultural BMPs, developing conservation plans, and implementing District erosion and sediment control responsibilities. Respondents from southwest Virginia indicated that they felt they were better able to handle current demands than were Districts within the Bay drainage area. Almost all Districts identified additional manpower, particularly technical personnel, as a critical program need. Most Districts indicated that a "typical" conservationist could develop 3-6 conservation plans during an average month though this obviously varies depending on site size, soil characteristics, slope, erosion potential, etc. Local jurisdictions indicated that a typical erosion and sediment control inspector could conduct 4-10 inspections per day. Again, there was a wide range of responses, and interviews revealed that inspections are frequently quite cursory in nature because of limited personnel. Eighty percent (24/30) of the Districts participating in this study felt that local governments within the District did not have sufficient technical expertise to effectively administer and monitor the state erosion and sediment control and

stormwater management programs. Of the localities responding, however, 74% indicated that they did have or receive adequate technical assistance in administering the programs, yet most cited a need for additional manpower. This discrepancy is difficult to explain, but should be examined. At least one Soil and Water Conservation District Director was not surprised by this finding, citing as explanation the varying degrees of expertise within a single department concerned with land-disturbing activities and the defensive posture which individuals tend to adopt regarding their own abilities and effectiveness.

Most localities report a relatively small turnover rate in program personnel at all levels, possibly because a majority of those personnel are long-term county or city employees. Districts also report a low turnover rate among employees, particularly at the administrative level. Turnover among clerical and technical personnel is somewhat higher. Training time for program employees is quite short and few localities have any minimum training and/or educational requirements for inspection and enforcement personnel within the program. Many jurisdictions do encourage or require some of their employees to attend state or university-sponsored erosion and sediment control seminars.

Program Implementation and Enforcement

In response to a direct question, 43% of the localities indicated that enforcement of the erosion and sediment control law or local ordinance presented a problem in their jurisdiction. Lack of manpower and lack of funds were the most frequently cited contributing factors to the problem of effective enforcement. The questionnaire allowed local jurisdictions to identify more than one factor giving rise to enforcement problems so absolute percentages were impossible to determine but priorities could be deduced from the responses. Of those localities stating that enforcement was a problem, 85% cited a lack of manpower and 39% cited a lack of funds as principal contributing factors. Both of these shortcomings, of course, can be categorized as a lack of sufficient resources dedicated to erosion and sediment control programs. A lack of judicial awareness of erosion and sediment control ordinances and regulations and limited enforcement options available to local officials were other frequently mentioned reasons for enforcement difficulties.

Additional Program Needs

Localities and Districts were asked to identify the ways in which additional funds and/or manpower could most effectively be utilized within their jurisdiction. Districts throughout the state overwhelmingly identified technical assistance and conservation plan development as their most pressing needs. Inspection and enforcement were cited by local jurisdictions as their most serious needs by far, being mentioned almost twice as frequently as other program needs. Plan development, plan review and the development of stormwater management programs were the next most frequently named areas requiring additional assistance.

The questionnaire elicited a number of opinions and recommendations concerning state actions which could be taken to aid Districts and localities in administering or enforcing the erosion and sediment control program. Apart

from additional manpower and resource needs, the most obvious deficiencies appear to be in the areas of training and public awareness and education efforts. It was clearly apparent, both from the questionnaires and from subsequent communications, that efforts in those areas are sorely lacking. Inadequate information and awareness of erosion and sediment programs was cited as a problem for the general public, industry and the judiciary. Several respondents suggested some type of mandatory training in sediment control practices for building contractors, or holding contractors, rather than owners, accountable for implementing erosion control practices.

Inspection and enforcement were identified as major shortcomings in existing program structures and a majority of respondents felt that a wider range of penalty options available to local officials would significantly enhance enforcement efforts. Many localities and Districts also suggested that exemptions allowed under the current program be eliminated and that consideration be given to incorporating water quality criteria into stormwater management control programs.

Additional issues raised in the survey and more detailed recommendations of the Chesapeake Bay Commission may be found in the Commission's 1984 "Annual Report to the General Assemblies of Maryland and Virginia".

Summary

A recurrent theme heard throughout the course of this study was the lack of sufficient manpower and resources to adequately implement existing programs. These deficiencies manifest themselves in almost all areas of the survey. Most localities and Districts throughout the state appear to recognize the importance of effective sediment control programs but simply lack the resources to administer and monitor the programs. Smaller or more rural jurisdictions in particular indicated a need for increased assistance.

CHAPTER IV - Conclusions and Recommendations

Because of (1) the difficulties in determining whether the Erosion and Sediment Control Law is indeed being adequately implemented and (2) the new initiatives in the Agricultural Pollution Control Program, too recent to evaluate at this point, it proved impossible to determine absolute figures for state, local and District personnel needs. Nonetheless, there are a number of indications that available resources are below optimal levels. These include:

1. Virginia's annual soil loss averages 6.61 tons per acre per year, eleventh highest in the nation and highest of the Chesapeake Bay states, indicating a need for additional conservation efforts.

2. While Virginia provides more support to its SWCDs than many states across the nation, the level of support is quite low when compared to other states in the Chesapeake Bay region. Staff resources have been increased dramatically in Maryland in 1984 and substantially in Pennsylvania since 1983. Thus, even with increases in state support for new positions in Virginia, the relative level of support compared to other Bay jurisdictions has not increased. A low level of support by the state and local governments might be offset by a high level of federal support; however, this does not seem to be the case as Virginia ranks fairly low in the level of federal support being provided.

3. Sixty percent of Soil and Water Conservation Districts returning the questionnaire are unable to respond to all requests which they receive for assistance. Since this response was given prior to the initiation of the new agricultural outreach effort and cost share program resulting from the Chesapeake Bay Initiatives, increased demands may aggravate the situation. On the other hand, new positions funded through the Initiatives may help to alleviate these problems.

4. While 74% of local governments believe they do have adequate technical resources at their disposal to carry out the erosion and sediment control law, 80% of the SWCDs state that local governments within their jurisdictions do not have sufficient technical expertise to effectively administer and monitor erosion and sediment control and stormwater programs.

5. Few local governments indicate that staff receive any special erosion and sediment control training.

6. Forty-three percent of local governments indicated that enforcement of the erosion and sediment control law was a problem; lack of funding and personnel were cited as the primary contributing factors.

7. Very few local governments have one or more individuals whose primary responsibility is implementation of the erosion and sediment control program.

8. Only 10% of local governments collect sufficient revenues from permit fees to offset the costs of administering the program.

9. Five individuals are available statewide for oversight of the Erosion and Sediment Control Law. These same individuals are currently working on the Agricultural Pollution Control Plan. This means that the number of state personnel available for implementation of the Erosion and Sediment Control Law has dropped from 5 F.T.E. to 2.5 F.T.E. under the Chesapeake Bay Initiatives. This has led to a discontinuation of a potentially very useful state review process of erosion and sediment control programs in rapidly developing areas.

Based on these findings, the Chesapeake Bay Commission believes that there is a need for increased staff resources at the State Soil and Water Conservation Commission, the local government, and the District levels. It proved impossible, however, to quantify precisely what level of resources would be desirable for effective implementation of the nonpoint source programs. It is highly unlikely that current staff and training levels at the local and District levels will increase unless the state government either requires it, or provides funding to pay for an increase.

The Commission believes that a thorough review of staff and training levels in each local government and Soil and Water Conservation District is warranted. This task can best be accomplished by an individual familiar with the state's program and local and District programs, working out of the Soil and Water Conservation Commission. There are not at this time, however, sufficient staff resources to carry out such a review. The Chesapeake Bay Commission, therefore, makes the following recommendation:

> The Soil and Water Conservation Commission should be requested to thoroughly review the staff resources and training needed by the Soil and Water Conservation Commission, the local jurisdictions and the Soil and Water Conservation Districts in order to pursue vigorous implementation and enforcement of the state's nonpoint source pollution programs. The Soil and Water Conservation Commission should provide a proposal for filling these needs in the 1986-1988 biennium. The Soil and Water Conservation Commission should be allotted one additional F.T.E. position in FY '85 to accomplish this task.

Based on existing sources of information, it is impossible to determine whether the Erosion and Sediment Control Program is being adequately enforced because there is no oversight provided to review local implementation of the program. The Commission, therefore, makes the following additional recommendation:

The Soil and Water Conservation Commission should administratively establish an ongoing process for reviewing local program compliance with the state Erosion and Sediment Control Law. Such a program should first address rapidly developing jurisdictions, but should review and evaluate each local program not less than once every five years. Two F.T.E. positions should be allotted to the State Soil and Water Conservation Commission, beginning in 1985, to accomplish this purpose on a continuing basis.

APPENDIX A

HOUSE JOINT RESOLUTION NO. 137

GENERAL ASSEMBLY OF VIRGINIA -- 1984 SESSION

HOUSE JOINT RESOLUTION NO. 137

Requesting the Chesapeake Bay Commission to assess the adequacy of staff resources throughout the Commonwealth that deal with nonpoint source pollution control.

Agreed to by the House of Delegates, March 8, 1984
Agreed to by the Senate, March 6, 1984

WHEREAS, pollution from nonpoint sources has been identified as having significant adverse impacts on the quality of waters of the Commonwealth of Virginia and in particular on the living resources of the Chesapeake Bay and its tributaries; and

WHEREAS, the Commonwealth of Virginia has enacted the Erosion and Sediment Control Law requiring local governments to regulate sedimentation from construction sites; and

WHEREAS, sufficient enforcement of soil and erosion control laws is lacking in many jurisdictions; and

WHEREAS, many local governments rely on the resources of the Soil and Water Conservation Districts for technical assistance in their erosion and sediment control programs; and

WHEREAS, agricultural sources of sedimentation are exempted from the Erosion and Sediment Control Law but are subject to voluntary programs of soil conservation provided through the Soil and Water Conservation Districts; and

WHEREAS, the State Soil and Water Conservation Commission is developing an agricultural Best Management Practices program to assist farmers in reducing sedimentation and runoff from agricultural lands, and will rely heavily on the resources of the Soil and Water Conservation Districts to carry out this program; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Chesapeake Bay Commission is hereby requested to:

1. Assess the adequacy of staff resources of soil and water conservation districts and local governments to deal with nonpoint source pollution control including:

a. Implementation of the state sediment control law,

b. Implementation of the state 208 Agricultural Plan, and

c. The provision of technical assistance to all farmers in critical or priority watersheds as determined by the Virginia Soil and Water Conservation Commission.

2. Assess the role and responsibility of state government in providing for adequate, trained staff to implement the erosion and sediment control law and to implement an agricultural Best Management Practices program.

3. Assess the role and responsibility of local government in providing for adequate, trained staff to implement these programs.

4. Examine potential revenue sources to provide for such staff and training; and, be it

RESOLVED FURTHER, That the Chesapeake Bay Commission is requested to make its recommendations, if any, to the 1985 Session of the General Assembly.

APPENDIX B

QUESTIONNAIRE TO ASSIST THE CHESAPEAKE BAY COMMISSION IN RESPONDING TO HOUSE JOINT RESOLUTION 137

(District Level)

QUESTIONNAIRE TO ASSIST THE CHESAPEAKE BAY COMMISSION IN RESPONDING TO HOUSE JOINT RESOLUTION 137

1. How many soil conservation personnel are employed by your District (exclusive of SCS employees)?

   Full-time _____
   Regular part-time _____
   Occasional part-time _____

2. How are these positions funded and what are the approximate budgetary contributions from the following sources?

   Federal government _____
   State government _____
   Local governments _____
   Combination _____

3. What is the approximate distribution of time and resources devoted to the following tasks?

   Conservation plan development _____
   Conservation plan implementation _____
   Erosion and sediment control plan review _____
   Public education/information activities _____

4. Approximately how many conservation plans can a typical conservationist develop during an average month?

   _____

5. How frequently are conservation plans updated?

   _____

6. How many farmers are contacted by District personnel (exclusive of SCS contacts) in a typical month for technical assistance, consultation, education, etc?

   _____

7. Do you feel that your District has sufficient expertise at its disposal to address soil conservation questions as they relate to water quality?

   _____

   _____

8. Do you receive a significant number of complaints from neighboring residents, civic associations, environmental groups, etc. about sedimentation problems?

15. Approximately how much money does your District collect in permit fees annually?

_____

16. Are there state or federal construction projects - not subject to your program - which have caused sedimentation problems in your District?

_____

Do such problems arise:

Frequently _____
Occasionally _____
Infrequently _____

17. Do you feel that local governments within your District currently have sufficient technical expertise to effectively administer and monitor state erosion and sediment control and stormwater management programs?

_____

18. Do you think that stormwater management programs should address questions related to water quality?

_____

19. Do you have any opinions or recommendations for legislative or administrative actions which could be taken at the state level to aid your District in administering or enforcing the erosion and sediment control program?

_____

_____

_____

_____

20. How could additional funds or manpower most effectively be utilized within your jurisdiction?

Program administration _____
Clerical support _____
Plan development _____
Technical assistance _____
Other (please specify) _____

_____

Name _____

Affiliation _____

Address _____

_____

APPENDIX C

QUESTIONNAIRE TO ASSIST THE CHESAPEAKE BAY COMMISSION IN RESPONDING TO HOUSE JOINT RESOLUTION 137

(Local Areas)

QUESTIONNAIRE TO ASSIST THE CHESAPEAKE BAY COMMISSION IN RESPONDING TO HOUSE JOINT RESOLUTION 137

1. How many local government personnel are employed in implementing soil conservation programs in your locality?

   Full-time _____
   Regular part-time _____
   Occasional part-time _____

2. How are these positions funded and what are the approximate budgetary contributions from the following sources?

   Federal government _____
   State government _____
   Local governments _____
   Combination _____

3. What is the approximate distribution of time and resources devoted to the following tasks?

   Administrative/clerical duties _____
   Inspection of sites _____
   Review of plans _____
   Enforcement of plans _____

4. What is the erosion and sediment control permit fee in your jurisdiction?

   _____

5. Approximately how much money does your jurisdiction collect in permit fees annually?

   _____

6. Are the revenues generated from permit fees sufficient to cover the costs of administering the erosion and sediment control program in your jurisdiction?

   _____

7. Approximately how long does it take to process the average erosion and sediment control plan in your locality?

   Less than one week _____
   Less than one month _____
   One to three months _____
   More than three months _____

8. How much money is budgeted by your <u>local</u> jurisdiction for the erosion and sediment control program annually?

   _____

Generally, how are these funds allocated and utilized?

Program administration _____
Plan review _____
Enforcement _____
Other (please specify) _____

_____

9. Does enforcement of the erosion and sediment control law or local ordinance present a problem in your jurisdiction?

_____

If so, what do you consider to be contributing factors to this problem?

Lack of funds _____
Lack of manpower _____
Lack of judicial awareness concerning the severity of the problems _____
Number of violations is relatively small _____
Magnitude of violations is relatively minor _____
Limited enforcement options _____
Other (please specify) _____

_____

10. In your opinion, would the option of imposing civil penalties for violations of the erosion and sediment control ordinance improve enforcement efforts?

_____

_____

11. If the possibility of imposing civil penalties were included in the Erosion and Sediment Control Law, what do you consider to be an appropriate maximum level of damages which could be assessed against violators?

Less than $5,000 _____
$5,000 - $10,000 _____
$10,000 or more _____

On what criteria should the award and amount of civil damages be based?

Nature or severity of the violation _____
Off-site damages resulting from the violation _____
Size of the project _____
Amount of bonding required for the project _____
Other (please specify) _____

_____

12. Does your jurisdiction require a performance bond or other security to ensure that sediment controls are installed?

_____

If so, how is the amount determined?

_____

_____

What is the range and approximate average dollar amount of such bonds?

_____

13. Have you ever required forfeiture of a bond or other security?

_____

If so, have the bonds proven to be adequate to cover the costs of installing needed control measures and/or correcting damages resulting from the lack of adequate control measures?

_____

_____

14. During the past year (or most recent time period for which you have statistics), how many times have the following enforcement actions been taken?

Notice to comply	_____
Injunction	_____
Stop-work order	_____
Court action	_____
Permit revocation	_____
Forfeiture of bond required	_____
Other (please specify)	_____

_____

15. How many inspections can a typical inspector conduct in a day's time?

_____

16. How frequently is the typical construction site inspected?

_____

17. At what point is the land-disturbing activity subject to the permit considered completed?

_____

Is there a notice of completion and final inspection?

_____

18. Are there state or federal construction projects - not subject to your program - which have caused sedimentation problems in your jurisdictior

_____

Do such problems arise frequently, occasionally or infrequently?

_____

19. Do you receive a significant number of complaints from neighboring residents, civic associations, environmental groups, etc. about sedimentation problems?

_____

20. Does your locality have or receive adequate technical assistance in the following areas?

Erosion and sediment control plan development and review	_____
Inspection	_____
Enforcement	_____

21. What is the approximate turnover rate for program personnel in your jurisdiction in the following areas?

Administrative/clerical	_____
Plan review	_____
Inspection/enforcement	_____

22. What is the approximate training time for program personnel in the following areas?

Administrative/clerical	_____
Plan review	_____
Inspection/enforcement	_____

23. Are there minimum training and/or educational requirements for inspection and enforcement personnel within your program?

_____

If so, what are these requirements? _____

_____

24. Do you consider stormwater management an important part of your erosion and sediment control program? Does your locality have a separate ordinance addressing stormwater management?

_____

_____

_____

25. State standards currently require that stormwater management programs address questions related to erosion. Do you think these standards should be revised to include water quality criteria?

_____

Does your locality currently have sufficient technical expertise to effectively administer and monitor the stormwater management programs?

_____

26. What do you consider to be the most important goals of stormwater management programs?

Flood control for major flood events _____
Flood control for minor flood events _____
Erosion control _____
Water pollution _____
Other (please specify) _____

_____

Which of the above standards are most directly addressed by stormwater regulations in your locality?

_____

_____

27. Do you have any opinions or recommendations for legislative or administrative actions which could be taken at the state level to aid your jurisdiction in administering or enforcing the erosion and sediment control program?

_____

_____

_____

_____

28. How could additional funds or manpower most effectively be utilized within your jurisdiction?

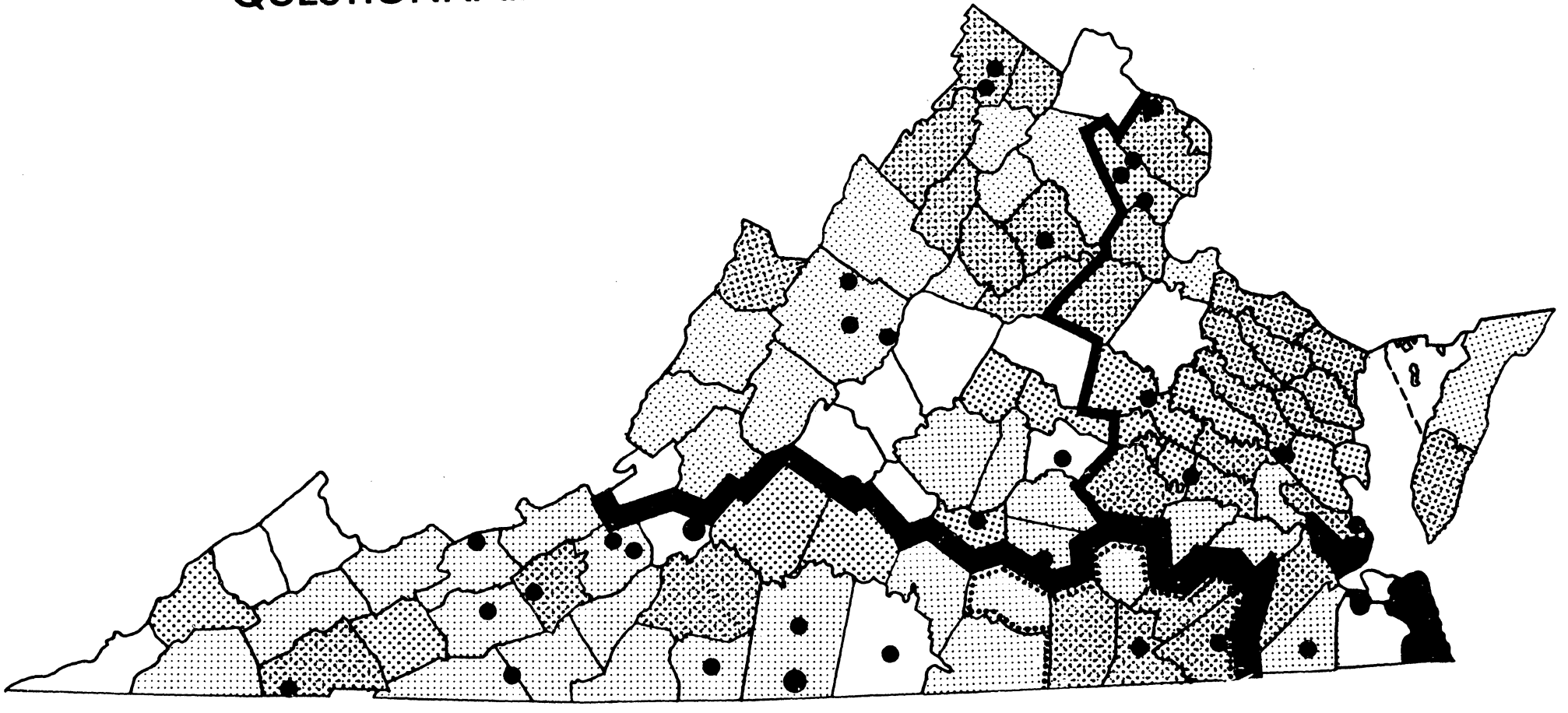
Programs administration _____
Clerical support _____
Plan development _____
Plan review _____
Development of stormwater management programs _____
Inspection _____
Enforcement _____
Other (please specify) _____

_____

APPENDIX D

DISTRIBUTION OF QUESTIONNAIRE RESPONSES

QUESTIONNAIRE RESPONSES



TIDEWATER

CHESAPEAKE

CHOWAN

DISTRICT RESPONSES

COUNTY RESPONSES

CITY AND TOWN RESPONSES