REPORT OF THE
STATE WATER CONTROL BOARD
ON

The Study Of Small Package Wastewater Treatment Plants

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

SENATE DOCUMENT NO. 28

COMMONWEALTH OF VIRGINIA
RICHMOND
1990

TABLE OF CONTENTS

EXECUTIVE SUMMARY

INTRODUCTION

The following is an executive summary of the study on small wastewater treatment plants conducted in response to Senate Joint Resolution (SJR) No. 161 of the 1989 Session of the Virginia General Assembly. This study is a continuation of a joint subcommittee study of "Pollution from Untreated Sewage Discharges and Failing Septic Tanks." The results of this earlier study were reported to the 1989 Session of the Virginia General Assembly in Senate Document No. 28.

SJR 161 directed the State Water Control Board (SWCB) to study the following three issues: (1) the means for assuring proper operation and maintenance of small package treatment plants; (2) how funds can be provided to small communities for the construction of wastewater treatment plants; and (3) the appropriate management system for on-site sewage treatment by the state and local governments in order to prevent the pollution of Virginia's aquifers, groundwater, rivers, streams and other bodies of water.

In this study the SWCB looked at two categories of package treatment plants: small wastewater treatment plants for single family homes (up to 1,000 gallons per day) and those for residential developments (up to 50,000 gallons per day). In addition, the SWCB held public meetings in Richmond, Warrenton, Roanoke, Wytheville, Franklin, and Woodstock. These meetings were attended by representatives of the various small treatment plant manufacturers, local government officials, environmental groups, developers, and private citizens. The attendance varied from only a few individuals to approximately 50 at the meeting held in the Valley where the largest number of these plants are located. A discussion paper was distributed at the meetings which outlined the problem and several possible options for addressing it.

OVERVIEW

Small wastewater treatment plants are used as an alternative to conventional septic tank/drainfield systems in areas of the state where the land does not perk, or where septic tank systems have failed and it is not possible to connect to centralized treatment systems. Small treatment plants are also being used by developers for subdivisions on land that does not perk or for other reasons such as to increase density or to limit the clearing of trees that would be needed for drainfields.

The SWCB issues Virginia Pollutant Discharge Elimination System (VPDES) permits for all point source discharges into state

waters, including these very small discharges from single family homes. The Virginia Department of Health (VDH) also has responsibility for these plants. An application for a septic system must be made with the VDH first. If the land is found to be unsuitable for a septic system by the VDH, than an application can be made to the SWCB for a VPDES permit for a small treatment plant. Further, the VDH reviews the permit application and it is not considered complete by the SWCB without the VDH's concurrence. It was evident at the public meetings that this is an area of confusion and frustration for the public.

Recent observations by the SWCB and the VDH indicate that there are numerous problems with the operation and maintenance of single family home plants. There is also a history of enforcement problems with small treatment plants other than those for single family homes. The VDH in response to its concerns established a committee consisting of VDH, local government and SWCB representatives. The VDH developed a draft policy for residential sewage flows under 1,000 gallons per day, with input from this committee. In addition, some local governments and environmental groups represented at the public meetings indicated a concern with the growing number of privately owned treatment plants serving new residential developments. Further, neighboring states are generally more restrictive in their regulation of these small wastewater treatment plants.

There were also comments from distributors and a manufacturer of the small mechanical wastewater treatment plants who would like to see a decision made so that they can continue to sell the plants. They expressed a general interest in working with the state in developing a program to provide operation and maintenance contracts.

RECOMMENDATIONS

Single Family Home Treatment Plants

Law: This study has demonstrated the need for a regulatory program to assure the proper maintenance, operation and monitoring of sewage treatment plants for single family homes. Therefore:

* The owner of a sewage treatment plant for a single family home should be required to obtain a permit from the Department of Health. As regulators of the plants, the Department of Health should be given the authority to require maintenance contracts, to charge application fees, and to impose civil penalties for violations.

Regulation: All of the issues related to insuring the proper maintenance, operation and monitoring of these plants are addressed by a draft policy developed by the Department of Health. Therefore:

* The Department of Health should implement its draft policy on residential sewage flows of 1,000 gallons per day or less.

* The State Water Control Board should amend its permit regulation to place these plants under a General Virginia Pollutant Discharge Elimination System Permit, if the owner has obtained a permit from the Department of Health.

All Other Privately Owned Treatment Facilities

Law: Concerns were raised that package treatment plants serving residential developments are often abandon by the developer and thereafter improperly maintained and operated by the homeowners. The Utility Facilities Act offers some protection for those plants serving 50 customers or more; however many of these are not in compliance with this Act. Therefore:

* The State Water Control Law should be amended to require these plants to incorporate as public service corporations.

Financial Assistance

* The state should increase funding for grants and continue contributions to the revolving loan fund to enable some of the state's smaller, fiscally stressed localities to meet their wastewater treatment needs.

SINGLE FAMILY HOME WASTEWATER TREATMENT PLANTS

OVERVIEW

The accepted practice for treating residential sewage when there is no access to a central system is to use a combination of septic tank and drainfield. In order for this type of system to work the soil must percolate. In many areas of Virginia very little of the land percolates, primarily because of the presence of clay soils, seasonally high water tables, or bedrock at or near the surface. Since these areas are also generally too sparsely populated to make central systems feasible, the only alternative that will allow for residential development is some form of small package treatment plant. Unlike conventional septic tank/drainfield systems, these plants may have an effluent discharge to surface waters. Generally, they are aerobic biological plants and may also include biological sand filtration. All of these plants with surface discharges must include chlorination and many are now required to have dechlorination as well.

The State Water Control Board (SWCB) has been requiring a Virginia Pollutant Discharge Elimination System (VPDES) permit for all point source discharges into state waters, including single family home discharges. The total amount of effluent discharged by all of the single family home plants now permitted is very small compared to other permitted discharges. Therefore, their water quality impacts are relatively minor. However, the SWCB is concerned that these plants may pose a water quality concern in the future because of the rapid growth in the number of plants. The first permit for a single family home package treatment plant was issued in 1978 and by December 1, 1989 the number of permits exceeded 850.

The Virginia Department of Health (VDH) has had concerns over the potential public health impacts from the growing number of single family home package treatment plants. As a result of these concerns, VDH established a committee consisting of VDH, local government and SWCB representatives. The VDH has developed a draft residential policy for sewage flows under 1,000 gallons per day with input from this committee. The VDH draft policy would require the discharges from aerobic biological plants to be at least 500 feet apart and 250 feet for aerobic biological plant discharges which go into sand filtration systems. It would also require site-plan approval and installation review by the VDH. It would require monitoring of the effluent monthly for the first year and quarterly thereafter for most plants, and quarterly for the first year and every six months thereafter for sand filter plants without pumps. The draft policy would also require proof of a contract for third party maintenance and operation of the plants.

Finally, the draft policy recommends, but does not require, that localities (whose economic development depends heavily on these plants) establish a sanitary district or service authority to control the design and use of these plants.

In addition to the use of these plants in residential development, there is the even greater problem of inadequate on-site disposal systems at existing homes. According to the Virginia Water Project's report of October 1988, Water for Tomorrow, "111,828 rural Virginians' on-site wastewater disposal methods are insufficient and present potential threats to public health." The Virginia Water Project report estimates that the total statewide cost of meeting this need is over $500 million. Therefore, a critical issue may be funding for replacement systems. However, before replacement systems are funded the issues of proper installation, operation and maintenance of the replacement systems should be addressed.

INSTALLATION

Small package treatment plants are not always properly installed. The SWCB and the Washington and Smyth County Health Departments visited the sites of several plants in November of 1988. One, among several concerns, made evident by these visits is the number of improperly installed and incomplete plants, i.e. missing chlorination units, improper location of treatment plants or discharge points, or poorly designed sand filter plants that allow effluent to leak into groundwater. The VDH's policy would require installation review by a local sanitarian before operation of a plant can begin. This includes a requirement for the submittal of an informal site-plan before a VPDES permit application is forwarded to the SWCB and inspection of the plant for compliance with plans and specifications.

OPERATION AND MAINTENANCE

Recent observations by VDH and SWCB staff support the concern that small package treatment plants are not properly operated and maintained. One of the most common operating problems is the absence of chlorine tablets. The chlorination units of many of these plants hold up to a 30-day supply of chlorine tablets. In addition, there are other operation and maintenance concerns. For example, in September of 1986 the Loudoun County Health Department inspected eight small package units which ranged in age from 2 months to 6 years. Two of these plants, one only two months old and the other only four months old, showed evidence of having recently overflowed. A third unit had an improperly operating pump and another was leaking raw sewage onto the ground. The problem with the operation and maintenance of these units appears to result from the homeowners' lack of

interest or lack of ability to properly maintain and operate them. Therefore, there may be limited water quality and public health benefits from installing these plants, if proper installation, operation and maintenance are not in some way guaranteed.

The Virginia Water Resources Research Center has initiated a study on the effectiveness of single family home package treatment plants at the request of the SWCB and the VDH. They conducted a survey of the owners of these plants in southwest Virginia as part of their study. There was one question on the survey regarding whether the owners had a maintenance contract. Of those who responded, 44 percent had maintenance contracts; however, since 62 percent of the plants are two years old or less it is likely that many of the 44 percent are still on the standard two-year service contract offered by at least two of the major manufacturers. On another maintenance question only 36 percent indicated that they add chlorine.

One approach to ensuring proper operation and maintenance is to require proof of an operation and maintenance agreement with a qualified third party. The VDH proposes to require proof of an agreement before an application for a permit is considered complete. This places the burden on the homeowner. Comments from manufacturers and distributors of these plants indicated support for a requirement for multi-year service agreements. In addition, they currently have such extended agreements available on an optional basis.

One manufacturer of these plants offers an inspection/service contract for approximately $10.00 per month that provides for any service needed and two inspections per year. A monthly visit would be needed if the maintenance contract is to be used to maintain chlorination, which also would raise the cost of the maintenance contract. In addition, the chlorine tablets cost approximately $20.00 per month and electricity runs about $10.00 per month. Monthly visits would also be needed for the first year a new plant was operating if the monitoring proposed by the VDH is required. The cost of a monthly sample could run $50.00 to $60.00 per month, resulting in a total cost per month that could approach $100.00.

MONITORING

Currently, monitoring of the effluent from these plants is not always required. The SWCB's VPDES permit program requires that the permittee perform any required effluent monitoring. This would be difficult, if not impossible, for the average homeowner to undertake. In addition, since only limited adjustments can be made in these plants, the effluent monitoring information would only give an indication as to whether the plants are being

properly maintained and operated, or whether they have completely failed. Finally, infrequent effluent monitoring could show widely fluctuating values. If a high value is indicated by the sample, several additional samples would have to be taken to see if the average would come within the limits.

The VDH recommends monthly monitoring for the first year and quarterly thereafter for aerobic and sand filter plants with a pump, and quarterly for the first year and twice a year thereafter for sand filter plants without a pump. The costs associated with these monitoring requirements are detailed in the discussion of operation and maintenance. The industry contends that effluent monitoring is not needed if the plants are properly maintained; however, they did not object to visual monitoring/inspection of the plants.

ROLE OF LOCALITIES

Virginia localities have assumed responsibility for residential sewage collection and treatment with the exception of those areas where septic tanks are allowed and in counties that have relied on privately owned treatment works. The VDH has responsibility for ensuring that there are no public health problems from septic tank systems. Since single family home plants require a great deal more attention to ensure proper operation and maintenance, these plants cannot be managed in the same manner. Homeowners have demonstrated that they are not willing or are not capable of ensuring proper operation and maintenance and could not be expected to conduct the monitoring of these plants. Therefore, someone has to be responsible to ensure proper operation, maintenance and monitoring.

Single family home treatment plants are allowing localities to encourage residential development in areas where it was not practical prior to the use of these plants. In addition, the use of these plants enables a county to avoid the cost and other responsibilities of a centralized system. Further, the growing number of these plants is creating the potential for adverse public health and water quality impacts. Therefore, localities have a vested interest in ensuring that these plants are properly maintained and operated. Most of the local governments that presented comments at the meetings or during the public comment period objected to any attempts to require them to assume additional responsibility for these plants. However, some local governments have assumed responsibility ranging from requiring extended maintenance agreements to prohibiting privately owned wastewater treatment facilities. Further, the SWCB and the VDH should not be responsible for both the regulation and the operation and maintenance of these plants.

ADMINISTRATION

The SWCB issues Virginia Pollutant Discharge Elimination System (VPDES) permits for these discharges. There are over 850 permits for single family home plants, more than half of which were issued during FY88 and FY89. Single family home permits also represent nearly 60 percent of all new permits issued during FY88 and FY89. The requirements for processing an application for VPDES permits for single family home plants are essentially the same as those for small municipal systems. Therefore, the rapidly growing number of permits issued each year is a continuing and growing administrative burden for the SWCB. In addition to processing initial applications, many single family home permits must be modified before they expire because of changes in ownership because many are issued to developers. As the number of applications for these permits has increased, it has become increasingly difficult to assign adequate resources to other higher priority activities involving more serious and significant dischargers.

Like other VPDES permits, single family home permits are issued for five years and must be renewed at the end of the fifth year. During the 1990-92 Biennium, a third of the existing single family home permits will need to be renewed, greatly compounding the administrative burden. Experience with reissuances to date has shown that they require more work than the original issuance and that homeowners are far less willing to cooperate. Several reissuances have required the issuance of a Notice of Violation because the deadline for filing for renewal passed without action by the homeowner.

In addition to posing an administrative burden for the SWCB, it was evident from the public meetings that the current process is an administrative burden for the public. They must first apply for a septic tank permit from the VDH and if it is denied they can begin the process of filling out a very complex application which is not complete until they have the concurrence of the VDH and their local government. These three different governmental entities generally are found in different locations.

From the public meetings it is evident that there is significant confusion over the state's administration and regulation of small package treatment plants. For instance, in the Valley the VDH is utilizing a departmental draft policy requiring operation and maintenance agreements for mechanical plants. As a result only discharge permit applications for septic tanks with biological sand filters are receiving VDH concurrence. However, the public in the Valley is under the impression that the SWCB has placed a moratorium on mechanical plants, even though these plants continue to be permitted in other areas of the state.

PRIVATELY OWNED PACKAGE WASTEWATER TREATMENT PLANTS USED IN RESIDENTIAL DEVELOPMENTS

The SWCB's experience with the package treatment plants used for small residential developments is that they suffer many of the same problems related to operation and maintenance as do the plants for single family homes. Generally these plants have a capacity of 50,000 gallons per day or less, whereas the capacity of single family home plants is less than 1,000 gallons per day. However, since local sanitarians within the VDH are not involved with these plants to the same degree as they are with the single family home plants, a different set of options is needed to address operation and maintenance problems.

Although small package plants are used for other than residential developments, discharge violations by plants serving residential developments are particularly difficult to enforce. With plants serving commercial or industrial property the SWCB at least has the potential to pursue closing a habitual offender; however, with residential developments this option is not practical.

Generally these plants are built by the developer and then deeded over to the homeowners when the development is completed. The homeowners generally do not have the knowledge, skills or resources to administer the proper operation and maintenance of these plants. Therefore, local governments often have had to take over these plants at considerable cost and as a result some localities prohibit privately owned treatment plants for residential development. As development pressures extend into areas not served by central sewage treatment plants the use of package treatment plants has the potential to become a significant public health and water quality problem.

A number of counties expressed concern over the number of privately owned wastewater treatment plants being installed in their counties. King George County has developed a program for managing these plants through conditional use permits. Their conditional use permit provides three controls. The first control is a requirement of notification for any change to be made in responsible operation of the treatment facility. This gives the county the right of refusal over unacceptable contractual arrangements for operation of the treatment plants. Secondly, they require operation bonds sufficient to cover 18 months of operation under the assumption that this period would be required to rectify any problems. The third is a requirement for local plan review. Isle of Wight county indicated that it is developing a similar conditional use permit program.

In addition, we received comments from three environmental groups that were concerned about the operation and maintenance

of privately owned package treatment plants. Two of these groups were particularly concerned over privately owned package plants serving residential developments. They stated that the study should give plants serving residential subdivisions greater emphasis than those serving single family homes. They were interested in seeing more stringent operator requirements and design specifications.

A concern expressed by local governments, in addition to the cost of local assumption of the responsibility for these plants, is how much control they could exercise since they do not own the plants.

In developing a recommendation for the package treatment plants serving residential developments, it became apparent that there is a need to protect not only public health and water quality but the homeowner as well. A mechanism is needed to require the applicant for a VPDES permit to demonstrate their financial ability to properly maintain and operate the plant, and to serve the homes on the plant. During the course of this study, the SWCB looked into the possibility of requiring these permit applicants to establish a public service corporation. In reviewing the Utility Facilities Act and speaking with State Corporation Commission (SCC) staff, it was determined that developers requesting permits for plants serving over 50 residences are required to establish public utility corporations under current law.

The SCC staff indicated that they know of only seventeen sewage or sewage and water service utilities, which indicates that not all subdivision developers have been complying with this law. In addition, permit applicants would be required to file a certificate of public convenience and necessity with the SCC which requires the applicant to submit, among other things, an income statement, a balance sheet and a copy of the corporation's latest tax return. (See Appendix B for a complete list of requirements.) This would ensure that, at the time of application, the corporation has the financial ability to properly operate and maintain the plant. In addition, it would protect those served by the plant to some extent by providing for regulation of sewage service rates and plant ownership. Further, Section 56-265.1 of the Code of Virginia was amended in 1988 to stipulate that the owner of a sewage plant serving 10 to 50 customers cannot abandon the plant without the consent of the SCC or all of the customers. This again offers some protection to the homeowners.

The SWCB needs to notify the SCC anytime it receives a permit request for a development with more than 50 residences until the State Water Control Law can be amended to require the establishment of a Public Utility Corporation as part of a VPDES permit application.

REGULATION OF SMALL WASTEWATER TREATMENT PLANTS BY NEIGHBORING STATES

We contacted several neighboring states to compare their regulation of small package treatment plants to Virginia's. Most of the states are much more stringent either by requiring the discharges to go into drainfields, thus removing the major benefit of these plants as an alternative where drainfields are not feasible, or by requiring licensed operators. The following is a brief summary of regulatory requirements of the states contacted:

Tennessee requires that all plants have certified operators. Tennessee will permit individual plants only if they discharge to a drainfield, so soil conditions must be the same as for a septic system. In addition, the owner of these plants must attach a restrictive covenant to the house's deed.

South Carolina also requires discharge to a drainfield.

Maryland requires a National Pollutant Discharge Elimination System (NPDES) permit and a certified operator. Maryland state law prohibits the discharge of chlorinated effluent, so plants must have a dechlorinator. Larger plants go through NPDES permitting process, and the counties have been requiring that the developer turn over title to them upon completion. Previous experience has proven that they usually get the plants once they have failed.

North Carolina does not permit individual package plants that have surface discharges. Private entities may hold NPDES permits, but they are having problems with homeowner associations. They require that certified monitors do the monitoring. North Carolina is developing a general permit to be approved by EPA to use on package plant applications.

Delaware, with few exceptions, also requires that all package plants discharge to a drainfield.

Pennsylvania has a two-part permitting process in place for small package plants. First, the NPDES permit must be approved. Then, there must be a second permit approved for the construction and maintenance of the unit. This permitting process is difficult and discourages small package plant applications. In spite of these limitations, there are approximately 400 home-sized plants in Pennsylvania, mostly in the Pocono resort area. Sites approved for NPDES permitting and package plants must be completely unsuitable for any other type of on-site disposal treatment system.

Pennsylvania currently requires the homeowner to file an annual report, stating that they are in compliance with NPDES regulations. Normally, they do not inspect individual plants unless they have reason to believe the plant is not working properly or if there are complaints. Under Pennsylvania state law, all permits for larger plants must bear the name of the municipality in which the plant is located, even if a homeowners' association operates and maintains the plant so the localities can be forced to care for these plants. Municipalities are encouraged to take over these plants before they fail.

FUNDING FOR SMALL COMMUNITY WASTEWATER TREATMENT CONSTRUCTION

Under the provisions of 1987 Clean Water Act amendments, the federal construction grant program is being phased out and available federal funds are being used for State Revolving Fund Capitalization Grants. In 1986, the General Assembly created the Virginia Water Facilities Revolving Fund as a permanent and continuing source of loan funds for municipal wastewater treatment plant construction.

CURRENT FUNDING PROGRAM

Federal grants and state general fund appropriations have been used to capitalize the fund, and these funds cannot be used for grants. However, the legislation which established the revolving fund also included a provision giving the SWCB the discretion to make grants, and the authority to determine the terms and conditions of any grant it made. The General Assembly has appropriated $200,000 annually for grants since FY87.

Review of projects for loan eligibility assigns considerable weight to water quality benefits with highest priority being given to those where a facility must be upgraded to meet Water Quality Standards or National Municipal Policy secondary treatment requirements. Since the revolving loan fund was established, 31 minor municipal facilities have been targeted for assistance. However, there are a number of small and financially distressed communities that have not been funded because they cannot qualify for loans. The cost of the upgrades required for these communities is an estimated $50 million. If grant funds are unavailable or insufficient, these projects must be bypassed.

Another factor used to determine project eligibility for Revolving Fund loans is a fiscal stress index that indicates a locality's relative financial need. Loan applicants must also propose a system of user charges to generate the revenue for loan repayment and for system operation, maintenance and replacement. Proposed user charges are reviewed to determine if they are "reasonable and affordable." "Reasonable and affordable" user charges are related to the percentage of an area's median household income they represent. The following guidelines are used:

Median Household Income	User Charge Percentage
Less than $15,000	0.5
$15,000 - $23,000	1.0
More than $23,000	1.5

User charges that are more than $25 per month or exceed by 100% or more the user charge derived based on the percentage-of-income guidelines are considered ones that could create extreme financial hardship. When proposed user charges are so high that a financial hardship may be created, various options are explored to develop a loan package that will not require excessively high user charges. Very low or no interest rate loans and various security arrangements are considered.

Of the 32 projects reviewed for funding during FY88 and FY89, zero interest loans were recommended for fifteen of them. This represents $28.7 million, or 34 percent, of the total $83.5 million committed for loans. But even with zero interest loans, proposed user charges exceeded the "reasonable and affordable" threshold for all fifteen projects. For seven of the fifteen, proposed user charges were so high that a financial hardship would be created. Funds available for grants are used in conjunction with the revolving loan program and grants are considered only when a locality cannot qualify for a loan.

There are other sources of funds available and these are sometimes used in combination. The Town of Pennington Gap has an application with the Farmers Home Administration for $1.1 million in loan monies and $705,000 in grant monies. In addition, they are attempting to secure funds from the Appalachian Regional Commission, and from the Community Development Block Grants program administered by the Virginia Department of Housing and Community Development. Further, they requested approximately $2.75 million which has been approved for funding under from the state revolving loan program.

COMMUNITY NEED

Many of the localities that have had or are expected to have difficulty qualifying for a loan are small towns. Recent estimates indicate that of the state's $2 billion in sewer improvement and facility needs, about $750 million is for communities with less than 3,500 residents. Most must provide sewage treatment services themselves since they are too far away from other municipalities to make a regional facility a viable option. Some localities' financial situation is so severe that they are unable to qualify even for zero interest loans unless the total amount required for the project can be reduced; therefore, a grant to reduce the total cost for which a loan was needed could make the project financially viable.

RECOMMENDATIONS

SINGLE FAMILY HOME TREATMENT PLANTS

The SWCB's and the VDH's concerns over the proper operation and maintenance of these plants met with general agreement from all parties, including industry representatives, at the public meetings and during the public comment period. The VDH's draft policy on residential sewage flows addresses the public health and water quality concerns expressed in this paper. Therefore, the VDH should be given the authority to require maintenance contracts, to charge application fees, and to impose civil penalties for violations. This authority would enable the VDH to implement its draft policy. The owner of a sewage treatment plant for a single family home should than be required to obtain a permit from the VDH.

Since this policy addresses all of the concerns that could be addressed through the VPDES permit process, there is no need for the extra layer of administration that this permitting requirement presents. Therefore, the State Water Control Board should amend its permit regulation to place these plants under a General VPDES Permit. An owner would comply with the General VPDES Permit by obtaining a permit from the Department of Health. This recommendation has the added benefit of greatly reducing the administrative burden on the regulated community. It also eliminates a duplication of effort between the SWCB and the VDH. However, to assume responsibility for these 850-plus plants which are growing at a rate of approximately 200 per year, the VDH will need additional funding and staffing. Ten FTEs (Full Time Equivalent Positions) would be needed to process applications and ensure compliance with the proposed monitoring and maintenance requirements.

ALL OTHER PRIVATELY OWNED TREATMENT PLANTS

In developing a recommendation for the package treatment plants serving residential developments, it became apparent that there is a need to protect not only public health and water quality but the homeowner as well. A mechanism is needed to ensure that the developer or other applicant for a VPDES permit has the financial ability to properly maintain and operate the plant. Therefore the SWCB recommends that an applicant be required to incorporate as a public service corporation before an application can be considered complete, if the proposed plant that will serve 50 or more customers. This mechanism would ensure that there is a corporation against which the SWCB could enforce the State Water Control Law and SWCB regulations. In addition, it would offer some protection for those served by the plant by providing some regulation of sewage service rates

and plant ownership. In addition, permit applicants would be required to file a certificate of public convenience and necessity with the SCC which requires the applicant to submit an income statement, a balance sheet and a copy of the corporation's latest tax return. This would ensure that, at the time of application, the corporation has the financial ability to properly operate and maintain the plant.

FINANCIAL ASSISTANCE

The state should increase funding for grants and continue contributions to the revolving loan fund to enable some of the state's smaller, fiscally stressed localities to meet their wastewater treatment needs.

APPENDIX A

SENATE JOINT RESOLUTION NO. 161

SP9129105

1989 SESSION
ENGROSSED

SENATE JOINT RESOLUTION NO. 161

Senate Amendments in [ ] - January 31, 1989

Requesting the State Water Control Board, in cooperation with the Department of Health, to study the problems associated with small package treatment systems and other alternatives for onsite sewage disposal.

Patron--Bird

Referred to the Committee on Rules

WHEREAS, the Joint Subcommittee Studying Pollution from Untreated Sewage and Failing Septic Tanks has come to believe that the Commonwealth must develop initiatives to contain pollution from inadequate onsite disposal of sewage; and

WHEREAS, there are many areas of the Commonwealth in which the soils are not appropriate for the traditional septic and drainfield system; and

WHEREAS, the Department of Health has been encouraged by past studies conducted by the General Assembly to promote the use of alternative systems in these areas and under other circumstances in which the traditional septic system cannot be used; and

WHEREAS, the joint subcommittee is of the opinion that additional data [is needed] on the operation of alternative systems, particularly small package plants which are privately owned and maintained; and

WHEREAS, the joint subcommittee understands that such systems are effective and reliable means of wastewater treatment if they are properly operated and maintained; and

WHEREAS, however, the joint subcommittee has been informed that all to frequently the homeowner does not understand the importance of proper maintenance of his treatment system and does not take the necessary steps to assure that the system is working properly; now, therefore, be it

RESOLVED by the Senate of Virginia, the House of Delegates concurring, That the State Water Control Board is hereby requested to study, in cooperation with the Department of Health, the problems associated with small package treatment systems and other alternatives for onsite sewage disposal. The Board and the Department are further requested to specifically address the following issues: (i) the means for assuring proper operation and maintenance of small package treatment systems; (ii) how funds can be provided to small communities for the construction of wastewater treatment systems; and (iii) the appropriate management system for onsite sewage by the state and local governments in order to prevent the pollution of Virginia's aquifers, groundwater, rivers, streams and other bodies of water.

A True Copy, Teste:

J. T. Shropshire

Clerk of the Senate

Official Use By Clerks

Agreed to By The Senate		Agreed to By The House of Delegates	
without amendment	☐	without amendment	☑
with amendment	☑	with amendment	☐
substitute	☐	substitute	☐
substitute w/amdt	☐	substitute w/amdt	☐
Date: January 31, 1989		Date: February 17, 1989	
/s/J. T. Shropshire		/s/Joseph H. Holleman, Jr.	
Clerk of the Senate		Clerk of the House of Delegates	

APPENDIX B

APPLICATION REQUIREMENTS

FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

(Revised October 17, 1988)

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION
DIVISION OF ENERGY REGULATION

APPLICATION REQUIREMENTS FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR WATER AND SEWERAGE SERVICE (New Company)

1. Incorporate as public service corporation (done through the Commission Clerk's Office).

2. Statement of number of customers to be served (must be 50 or more within two years).

3. Approval of governing body of political subdivision in which territory is located. (If a public service authority exists in the political subdivision.)

4. Estimate of cost of construction, operation and maintenance of system.

5. Quantity, size and type of mains to be used.

6. Water - source, yield (GPM) and storage capacity.
   Sewer - capacity of treatment plant.

7. Two identical U.S. Geological Survey Maps showing exact area to be served outlined in red. (Send these maps along with one copy of application to: Division of Energy Regulation, SCC; P. O. Box 1197; Richmond, Virginia 23209.)

8. Proposed rates, rules and regulations (1 copy - 8 1/2 x 11 with each copy of application). Include two additional copies along with maps in the mailing to the Division of Energy Regulation.

9. Water - permit from State Health Dept. - can be conditional.
   Sewer - permit from State Water Control Board when necessary - can be conditional.

10. Name, title, address and telephone number of persons to be contacted in connection with complaints or emergencies.

11. Income Statement

12. Balance Sheet

13. Latest Tax Return (Copy of)

- When available. If not available, give explanation.

14. Mail original and 8 copies to: Clerk; SCC Document Control Center; P. O. Box 2118; Richmond, Virginia 23225.

15. If there are questions, call toll-free 1-800-552-7945. Ask for Mr. Baird at 786-5543 or Mr. Bailey at 786-4264.

APPENDIX C

COMMENTS FROM THE PUBLIC MEETINGS

COMMENTS FROM PUBLIC MEETINGS ON SJR 161

Friday, September 8, 1989
Richmond, Virginia

Ken Loard: My name is Ken Loard. My company is a distributor for Multi-Flow wastewater treatment system. This is a small residential home treatment system, an aerobic system that has been on the market and installed in the rest of the country for about the last 20 years. We have been installing this system in the State of Virginia for a period of about 4 years. We were following the policy guidelines established originally by the Water Programs Division of the Health Department issued in 1983. Essentially, it required an approved system to be in the Class I Aerobic Wastewater Treatment System as designated by the National Sanitation Foundation of which the Multi-Flow system is. There are a couple of others on the market that also qualify.

To date, we have installed approximately 100 systems in the State of Virginia, pretty well all over the state concentrated in certain little hot areas that do not perk. We have a reasonably successful program. We have provided service for these hundred systems and in all instances, under the requirements for a Class I system by NSF which requires you to provide 2 years of service initially, which we have done. This requires that you check the system each 6 months and correct any deficiencies and, of course, respond to any problems that the homeowner might have.

The system is fully protected by an alarm system that protects from high water. We have very conscientiously serviced these systems throughout the state and we have responded in most instances where we have had problems. We have had problems in about 4 systems out of the hundred or so that we have installed. These have been in all instances, the result of the homeowner not following the rules that are established. Let's face it, you are in the wastewater treatment business when you put in an aerobic system and there are certain things you cannot put down the drain that you might put down the drain if you are on city sewer or if you're on a septic tank system. People are pretty lax about what they will put down the drain and they obviously have to worry about ratios, have to worry about BOD levels, pH and all of this type of thing that you normally do down here at the Richmond Wastewater Treatment Plant. Our system is designed so that if it does malfunction, if you put something down the drain that kills the bacteria, then the filters plug and the system stops operating. It stops discharging because of the plugged filters, the water level rises and turns the alarm on. If you do nothing about it, it will just overflow into your yard, it will not discharge and you will essentially have a septic tank on your hands. Therefore, the homeowner has no option, he must call us. If its within the first two years of operation, we'll come and take care of the problem and try to determine what has caused the problem and as a result, we think we've had a reasonably successful program.

Back several months ago, Don Alexander called a meeting to discuss and present to all interested parties the draft policy that you just referred

to. I am told that it is being reviewed now to be implemented and I guess we are sort of in limbo in the aerobic systems. Not much is happening now because we're waiting for the implementation of dealing with this policy or something that will replace it. So, that's sort of a situation we're in right now where we are just waiting for something to happen. Waiting for the other shoe to drop so to speak so that's the, I guess, our main concern.

We are very much interested in seeing something get resolved here because we do take issue at least with the Multi-Flow system as to some of the objections. We have, on our many inspections of the hundred or so systems that we have, yet to find any of them turned off. If you turn a Multi-Flow system off it will stop operating, it will stop discharging and overflow and you've got a bloody mess on your hands. As a result, we haven't seen anybody turn it off. Also, we check on the chlorination, of course, every six months and yes we have found some that have run out and once filled, cues back up and cautioned the homeowners that they better not let it run out because the Health Department could come down on them pretty hard.

We have found from our experience with the local counties, for instance, Loudoun County has 20 or so systems installed. They have been installed over the last 4 years. We have service contracts in effect there - some of which have had the first two years have run out. The Loudoun County Health Department requires that the contract be renewed with a copy of the service organization. It is up to each one of our dealers what he charges but we have charged $150 per year for a minimum of 2 years for a total of $300. We feel it is fairly reasonable for assuming full responsibility of services. This has worked very well in Loudoun County. Granted if the county doesn't have this rule, this requirement, the homeowner may not renew their service contract.

I just wanted to state the situation as it appears from the other side. We feel like we have made a contribution to wastewater treatment in areas that needed it. We take issues with people, at least as far as Multi-Flow is concerned, if they are not being serviced. If there has been a problem and we've been notified of it, then we correct the problem. I guess our concern is that we would like to see something happen now. Let's, get the new rules in effect and let's get the show on the road. That's about all I have to say. Thank you.

Peyton Robinson: My name is Peyton Robinson and I'm the Watershed Management official for the City of Charlottesville and the County of Albermarle. I haven't had the chance to review these materials in their entirety so my comments are simply preliminary nature but I just wanted to respond to a couple of things. I think, it appears at least that in grappling with this issue, the Health Department and the Water Control Board are facing a situation where they have got some existing problems that are difficult to remedy and the concern in future those impacts are gonna be felt. I think it's going to take a combination of approaches to resolve these issues. I'm not sure that any one of the options that have been put forth is going to be adequate to solve the problem. I think that the Virginia Department of Health and Water Control Board oversight needs to remain in place. I think there is possibility for some sort of up front fee - whether that could be an impact fee from developers or homeowners or

ontribution to a revolving fund for localities to rectify situations that me up or bond or some sort of financial mechanism that can be used to olve problems once they occur over the life of the system.

I think that certainly local water and sewer authorities are going to resist taking responsibility for sparsely located and individual systems. That will be a difficult proposition and I think there needs to be some attention given to the density of these systems besides that has been proposed. I'm not sure that the standoff distance or separation between individual systems is adequate. My responsibilities include protection of public drinking water supplies. There should be some language included in whatever policy is adopted that would prohibit these systems in public drinking water watersheds or ensure that their location is such that they would not impact public drinking water supplies. If they do fail and they are not monitored properly, there could be severe impacts on public health. I have a number of questions about how this policy will be put in place. I think there has been an effort statewide to dechlorinate effluent. I think dechlorination would be appropriate for all these systems and as far as oversight of their installation and monitoring, I think that brings into question, how the third party would be certified. Whether or not there would be a training program or other mechanism by which these people could be certified and that's about all I have. Thank you.

John Short: My name is John Short, I'm the county engineer for King George County. Over the last year and a half, King George County has had e opportunity to address or attempt to address the first two issues sted in your public notice - the means for assuring proper operation and maintenance of small package treatment systems; and how funds can be provided to small communities for construction of wastewater treatment systems like mine. My comments regard both of those issues.

Regarding the issue of small package treatment systems, King George County has been grappling with this issue for several proposed private systems in the county and has taken the following approach. Conditional use permits have been painstakingly developed and issued for several projects proposed within the county. No plants are built and operated so the school is still out on how good a job the county may have done in providing protection for the county and residents of the residential developments involved through the conditional use permit. In essence, what has been done is developers, in addition to requiring proper zoning, have been required to make application for conditional use permits for water or sewer utility systems in residential and commerical districts. The conditional use permit developed for wastewater treatment systems provides three controls of the type that have been discussed in this discussion paper. The first control is the requirement of notification for any change to be made in responsible operation and maintenance of the treatment facility. This gives the locality through the conditional use permit the right of refusal over unacceptable contractual arrangements for operation of small package treatment plants. In addition, operation bonds have been required covering some plants for 18 months worth of operation under the assumption that that period of time would be required in order to rectify any problems, financial or otherwise. This would enable the unty or some other agency to step in and use the monies from a source other than county or state funds to rectify any problems that might occur

with the development or with the treatment system in the development.

The third thing that has been required is local plan review. Now many localities, including King George as a matter of fact, do not have the wherewithall to conduct the comprehensive planning for the treatment plant. That is generally the purview of the Health Department's Water Program Office and the State Water Control Board. However, a lot of coordination is required to get a treatment plant from the concept stage through permitting on the drawing board and in construction. By requiring plan review and coordination between the developer or builder of a private treatment plant for a residential development, the localities as well as VDH and the Water Board has seemed to foster communication. If nothing else, this has raised the comfort level of those of us in King George County who have had to deal with these projects.

As I look at the proposed options that are mentioned in the discussion paper which I just seen today, it seems to me that King George County is anticipating a continuation of the existing policy of requiring permitting; VDH and the State Water Control Board's oversight of these private systems; requiring some sort of oversight of a contractual operation and maintenance policies in effect for these private systems; and also requiring some sort of operations bond. I would certainly suggest that those items continue.

Again, let me say that we have not had the rubber meet the road in King George County yet. We have one plant that is fixing to go under construction that would be a small package treatment plant with the prospect of one other in the not too distant future. We hope that, we have anticipated some of the problems that may arise and that our system work well under the Board and any other recommendations which may come out of these investigations. Also that we could easily implement them by including other conditions for future conditional use permits.

Just a few comments in regards to funding for small communities of wastewater treatment systems. I essentially want to apply to the Water Board and all those involved in Virginia's Revolving Loan Fund Program, King George is one of these small financially stressed communities which is benefitting currently from, will be shortly benefitting from a Virginia Revolving Loan Fund loan to improve one of our treatment plants in the county and hopefully get ourselves out from under the State Water Control Board's consent decree. I heartedly endorse Virginia Revolving Loan Fund Program and feel that it has been, in the case of King George County and in my involvement with it, efficiently and expertly managed. I endorse increasing funds particularly to aid communities who are stressed but also with an eye towards the fact that the development is going to occur and in some smaller communities like King George whether we choose to have it. While we may not be the poorest community in our region, we may be amongst the least able to properly plan for assuring water quality through developing community systems. In fact the revolving loan fund or other monies available for us to sewer first, as we might like to is part of the county's improvement project. It may help reduce the number of these small residential treatment facilties that people are going to want to propose. In other words, if we can keep utilities developed through the localities ahead of the residential growth, the pressure to develop

private facilities might be reduced. Some of the problems that you're running into in item number one; might go away as localities with established utilities, use to working with Virginia State Water Control Board and Department of Health, can use some of the economy's scale to get the utilities into the areas of development themselves rather than having sprinkling of private plants and even single family home systems developed. So these two things interact. It's not just communities that don't have the cash, it's communities that don't have the cash to adequately plan for the development which is going to come and those are the two issues that I wish to address. Thank you for your time.

Patricia Jackson: My name is Patricia Jackson. I'm the executive director of the Lower James River Association. I have just seen your position statement so I haven't had time to really review it thoroughly but we have had serious concerns about package sewage treatment plants particularly for subdivisions for a number of years and have an individual permit hearings requested that special conditions be put on those permits by the Water Control Board to try to assure some accountability in terms of how they are operated and maintained and what their track record is so to speak. We have several points that I would just like to bring up that we have reiterated a number of these and I would say that just at first glance, your draft discussion paper seems to focus more on individual single family home systems than it does package plants for subdivisions. I'd like to see more information on those particular systems because I think there is a greater potential in some areas for water quality problems because you have a larger flow as more of these begin to dot the shoreline in developing areas, I think that the potential is even greater.

There are a number of points that I think we feel should be considered if these package plants are going to continue to be permitted. I wonder if they should be either publicly owned or somehow bonded to provide some financial responsibility for long term operation and maintenance of these systems. What tends to happen often times is that once they are permitted and in place, there is no accountability. Nobody is checking up on these systems either local or state governments and if there is a failure, it's often the responsibility of the local government to take over that system or replace that system somehow. It can be a tremendous financial burden on local governments. So if they are either required to be publicly owned and operated or bonded somehow so that there is some money available in the long term, we think that that would help.

We also feel that normally the minimum operator requirements for these package plants is insufficient. It's basically the lowest amount of time that can be required and what we have seen in the literature is that most of these plants tend to fail because of improper operation and maintenance. This seems to be the key problem with these facilities is that they are not properly operated and maintained and no one is there when they do fail and you end up having a problem that becomes even greater because no one there to correct it immediately. We think that there needs to be a more reliable plan required for such plants for solids removal to prevent anaerobic conditions from developing. In a number of instances, there is inadequate provision for solids removal and sludge disposal and it can accumulate as a problem in the system. We would also recommend dechlorination or some type of alternative disinfection to

chlorination in order to prevent the discharge of chlorine which can be toxic in very small amounts. Often these systems are discharging into very small tributaries and they can have even greater impact than they would in a large river system. We'd also suggest that there be provisions to accomodate flow variations. Often times plants are used for facilities like summer camps or schools where the flow varies over the course of the day or week or a month or a year and there needs to be some kind of flow equalization for systems like that because the variability of the flow can create problems with the system. It's not designed to adequately accommodate that. Some type of holding facility also should be considered as a condition on these systems so that in the event there is a failure, you can hold the effluent and not have it discharged untreated or improperly treated to the receiving stream.

Also, in a number of cases on the James River, we've seen these be proposed to be discharged immediately at the shoreline and often times that's a great distance from the main channel of the river. Although the model that the Water Control Board uses to determine effluent limitations assumes complete dilution in the river, as if it were immediately being diluded. So in order to more realistically simulate the conditions that you've assumed in your model, we've recommended for all the permits considered on the James that that the dicharge pipe be extended to the main channel in order to get the dilution that your model assumes. It also keeps any discharge away from the immediate shore line which often has sensitive areas.

Also, we would recommend routine inspection and monitoring by the locality or the state to assure proper operation and some kind of quality control which is severely lacking for these systems. In terms of the draft discussion paper, I think that more information needs to be provided for those who will be making a decision about these systems particularly about the history of failure of these package plants. We've reviewed in the literature one significant study that indicates an 80% failure rate of the package plants primarily due to operation and maintenance problems, but also in some cases improper design, having a system that is not adequate to meet the needs of the particular facility that is being installed. We would suggest that you review not only the history of these facilities in Virginia but also in other states that may have a longer history and have more experience with failure of these systems. Whatever policy is adopted or position that's adopted should try to offset the probability of failure of these systems. I'd add too, that the financial implications have not been adequately addressed by your position paper because there is no discussion about financial responsibility for the individual owner. Providing funding for localities unless the locality owns the system, that's not applicable and there needs to be some financial accountability by the owner. One significant situation that we are aware of is that down in Virginia Beach there were a number of package plants put in for development where the developer installed a package plant, turned it over to a homeowners association no operation and maintenance essentially ever took place and just within a matter of time, of course, the systems failed. Virginia Beach had to come in, take over those system, replace them, hook up those subdivisions to central sewer and it cost in the neighborhood of $9 million dollars to accomplish that task. Often we hear local governments as they are considering subdivisions talking about tax revenues coming into the county but they are not aware of the fact that

'e cost that could be involved with one of these systems if it does fail d there is an 80 percent chance that it will fail. We think that the ıocal governments need to be more aware of the financial impacts as well. We'll probably submit some written comments. Those are just some ideas that we've had and just some first responses to your paper.

Ted Constin: My name is Ted Constin, I'm the director of planning and zoning in Mathews County. First thing, don't panic, this is not my statement. This is my work folder on individual wastewater treatment systems and in that, I got two documents. One is Senate Joint Resolution 161 and one is Senate Joint Resolution 160. I think when you read the two documents together, you get a very good example of the state planning process. Senate Joint Resolution resolves that local governments are hereby requested to initiate onsite sewage management district so on and so forth. Senate Joint Resolution 161 says will study the issue so the course has been decided and then we're going to justify the course we're taking after the fact. I'm disappointed to see that these public hearings are not being held any further East than Richmond. This is not a concern just to the Western Region of our State. Mathews County has wrestled with this issue, Gloucester County, one of the fastest growing counties in the state if not the nation has wrestled with the issue, Middlesex County is wrestling with the issue and the entire middle Peninsula region is wrestling with the issue and I think that some input should be taken from that region of the state.

Another item I'd like to bring up, I too have not had a chance to mpletely read the draft document but it has caught my eye that the small .ckage plants, individual home units are not available for properties which do not perk. That is not necessarily the case. We have one going on in Mathews County now where the gentleman is restoring a historic home. He was able to obtain from the Health Department, a seasonal permit and that did not satisfy his particular needs and he has pursued this option. So, I would caution you to be very particular in your details, in your fact statements. There are exceptions to the rule and then exceptions to the exceptions as I have come to learn working with both the Health Department and the State Water Control Board.

Mathews County is the second smallest county in Virginia. Arlington is the smallest. But if you subtract our water area, we are the smallest but we have 214 miles of shoreline. Our bread and butter economic development is single family housing along the waterfront. However, that's the best land we have for perking in Mathews County. Our interior areas of the county do not perk as well and for any type of commercial development, we do rely on the larger community systems. The case in point, the county is the sole operator of a small system that's a gravity as well as vacuum system. This system was constructed following a court order brought about by the State Water Control Board requiring us to do something about the failed and failing septic tanks in our village area and since then, since the early 1970's where this plant was built and put into operation, the state, the State Water Control Board has consistently increased the regulations without ever offering additional revenue if any revenue. The options here, I guess I'm speaking for local government, particularly cal Tidewater government which is having to carry to the Chesapeake Bay ocal Assistance Board's regulations. The State Water Control Board has

the mandate to protect the waters, don't protect the waters by giving the job to local government. If it's need be, regionalize it, increase your regional office staff, give them the inspection personnel that they need to go out and take care of the little jobs which they do not address at this time. I will reserve comments to follow up with a letter. Please do not give the burden of monitoring and inspection and care and operation of these treatment plants, whether on a subdivision scale or worse yet, on the single family scale to local government. We just cannot carry it with all the other mandates that we have from all the other state agencies. Thank you a lot.

SEPTEMBER 11, 1989
Warrenton, Virginia

Richard McNear: The following is submitted for your consideration concerning Senate Joint Resolution 161 concerning a means for ensuring proper operation and maintenance of small package treatment systems, it is suggested that standards of quality and reliability should be established by the State; testing to assure same should be required and only those approved should be authorized for use; require maintenance contracts and periodic inspections; and certification of proper operation by a licensed certified inspector. Concerning how funds can be provided to small communities for the construction of wastewater treatment systems, it is suggested that a portion of lottery proceeds or other designated revenue and a low interest or matching fund established. Concerning the appropriate management system, onsite sewage treatment by state and local governments, it is suggested that you require that appropriate instructions for the proper use and maintenance of the onsite system be given to the new owner at the closing of the real estate transaction when an onsite system exist and issue permits for a specified period; and require pumping of septic tank inspection of drainfield for renewal.

Robert Dennis: I'm Robert T. Dennis, President of the Piedmont Environmental Council. I'd just like to say that we have been concerned with the way the small units have in fact functioned in our service region and a couple of years ago employed the engineer from CH2M Hill to do an evaluation of household level wastewater treatment plants. A copy of this whole report was filed with the Water Control Board a little under two years ago in connection with an application for a permit to construct one of these small systems by Scott Shaeffer here in Fauquier County. I really want to call to your attention the fact that the technical document with some suggestions in it has been filed and I would like to redirect your attention to that document. It must be in the Board's file some place. What CH2M Hill did for us was review the literature of studies that had been made of small systems where they were in place and they also reviewed the small package plants that were available on the market and critiqued them. It showed that grit removal was necessary or desirable beyond what was provided in the system. There was one quote that they found from a study done in Kentucky that I think sums up what we feel about these things. The quote was from a formal study conducted in Boyd County, Kentucky of existing units and the author of that study found "that the average homeowner either cannot or will not and probably should not properly assume the maintenance of his own sanitation device. All

equipment involved must be owned, operated and maintained by a public body". That sort of sums up our conclusion about these small systems.

September 12, 1989
Roanoke, Virginia

Todd Stone: Mr. Chairman, I'm Todd Stone with the Stone Company. Several, well, as much as 12 months ago, we presented to the State Health Department a system that we called third party certification and it's under the NSF (National Sanitation Foundation). What we proposed doing was making it mandatory to have sewage contracts on each individual aerobic unit, made it mandatory for the life of the system. What the third party certification stands for is NSF would certify that: we would, in fact, build a unit up to their standards; we would install it to their standards; and they in turn, would certify that we would install it and maintain the unit. If we did not maintain the unit, then NSF would pull their certification from us and we could no longer sell the units. This was proposed 12 months ago, and so far, we haven't been able to get it off the ground. The Health Department says they don't have the people to do the monitoring, the Water Control Board does not have the people to do the monitoring, so it looks like it should be back in the private sectors hand to do any monitoring that's done on the systems, yet, we can't get anyone to move on it.

What we would like to know is how do we go about submitting for this third party certification to get it approved and get a pilot program going on it? How do we go about presenting - this is the document that we have to work by. All of our systems are approved by NSF and they guarantee the system to work and they guarantee us to monitor the system and do everything that is required to be done to them. How do we go about getting something like this in the state's standards. The Health Department doesn't want to be bothered with these units, the Water Control Board doesn't want to be bothered with them, yet, there is a tremendous need for them.

Well, I have a few concerns about the documents that the Health Department has put up and one of the problems is the monitoring they are requiring. The monitoring they are requiring on the systems, the way they've got it set up, monthly monitoring would cost several thousand dollars a year to the individual homeowner. A homeowner can't afford that. Is the county or the state willing to pick that tab up or is that the Health Department's way of getting the aerobic unit completely shut out of the system. These units were tested by NSF, they were shock loaded, in other words, they would work at 500 gallons of raw sewage and they put out secondary effluent and they met all the secondary wastewater treatment guidelines. Yet, the State of Virginia would not accept that as standard. They wanted to attach other testing to the system. I think it's entirely wrong. I think they ought to let the private sector take this thing over and go with it. That's all I have.

Macon Sammons: I just want to take a few minutes to elaborate on a subject that I addressed in a letter to Lori Freeman about a month ago. Specifically, and Bob Burnley knows a lot about our situation, Alleghany

County has a total of 11 water systems and 9 sewer systems servin altogether 5,000 people at the top, adding it all together. These system individually serve between 150 and 2,000 people and I'm most particularly concerned about the ones on the bottom end of that range. I want to give you some examples and tell you why this has been a very, very tough problem for us and I think, in a very real sense for the state as well. I am glad to see this study has been authorized and I do hope it will help provide some new answers for folks like Bob and myself who have to grapple with these, these really tough nuts.

About two years ago, I wrote a letter to the members of the Senate Finance Committee. It was really a follow up to a rather lengthy hearing they had had that dealt with the financial stress of localities and I wrote this letter to focus in particular on one source of that stress, namely, putting in small sewer systems that conform to the Cleanwater Act and the requirements that have come down to us through the municipal compliance plans and related regulations and I cited only four small areas. One called Clearwater Park. It has about 120 connections, at that time, like I say, this was back 2 1/2 years ago actually, January, 1987. At that time, the official estimate of the cost of putting in a conforming system was $450,000 and that comes out to $3,750 per dwelling. That is one of the systems that is under our municipal compliance plan. The next one, Cliftondale Park serves perhaps 200 connections. The estimate at that time was $373,000, actually, that's not too far off, but I think now that we've got bids, it came in a little higher than that. In that one, the cost was $1,865 dollars per dwelling. Selma, 225 connections. The cost was $389,000 or $1,730 per dwelling and here is the worst one of all; little community by the name of Westwood.
Let me just digress for a moment. Westwood right now has - these other three areas do have primary treatment but Westwood has nothing other than drain field systems in an area where soils really aren't suitable for drain fields so they are stuck in wet springs like we had this year with septic seepage right in their yards, right under foot. In the case of Westwood, counting absolutely everything we could possibly count, you've got 45 homes and the best estimate, lowest cost system conforming to existing technology and regulations was $340,000 or $7,500 per dwelling. Now, none of these areas are what we can call high income areas. In fact, I would say any of them, other than Clearwater, are what we could call even moderate or medium income levels. One or two are actually, I think, properly classified as low income but even if we were able to get a zero rate loan under the revolving loan fund, we are still faced with some terribly disturbing numbers.

I'm gonna go back to the Westwood example for just a moment because this is the one that is perhaps toughest of all for us right now. The $340,000 estimate I cited a moment ago is based on a combination of the existing septic tanks, using those septic tanks in the ground and installing a mass drain field. We are using what we can out of the old individual systems and replacing what is just not functional with new drain field lines and that's where the $340,000 estimate came from. If, however, we, for whatever reason are required to connect to the City of Covington, the Covington Wastewater Treatment Plant, we are looking at $555,200 and when you do that, you are looking at an investment per dwelling based on the more realistic, I might say, still optimistic total of 40 dwellings, you

et $13,880 per dwelling. Even with a zero rate loan, that gives some terribly disturbing cost per user and I think you all know that there is no real clear legal basis unless you have a public service authority for mandatory connection in counties, so if we perhaps take a more realistic total here, of lets say just for discussion, 20 homes that we decided to connect, you're looking at, believe it or not, as high as $27,000 you'd have to spend per dwelling. It's obviously out of reach of the well, of anyone.

I have, a number of times, told people in this area who really wanted some service and we wanted to help them have some service, that if they were willing to place a second mortgage on their home, we could indeed help them. You see because of all the other things we've had to do up to now to get our sewer facilities in line with the Clean Water Act and the municipal compliance plans, we have water and sewer bills that are $60 to $75 a month. That's not at all uncommon. I'm talking only about an 8 to 10 thousand gallon a month range which is on the high side of normal, is the the way I'd classify that consumption and that costs $60 to $75 a month for water and sewer in Alleghany County right today. Those rates are perfectly awful. We have people tell us that their water and sewer is their highest utility bill and I'm sure that's true. With that kind of situation, we're just not in a position to lay anymore freight on our users because already that is really creating, for some of our lowest income people, it's creating a very serious situation already. I am concerned that in some of the areas where we are right now, under our CDBG grant, connecting some low income homes that even though the tap fees have been picked up through the Virginia Water Project and the labor provided by the county under that grant, they simply aren't going to be able to pay their user charges.

I apologize for taking a little bit of time to go into this sort of detail but I simply wanted to try to share, as best I could, our dilemma. As I say, we, taking the little example of the little community of Westwood, we would truly like to help those people have what is considered a proper and conforming system. We simply don't know how to with their money, with our money and there is no other sources right now we know to turn to. They aren't quite poor enough to qualify for a CDBG grant so we're just right now kind of stuck but that's essentially, I think, it. Like I say, I appreciate the existence of this study commission and the effort that you're working with Rick. I'd be glad to provide more information or to help or contribute in any way we can. Thank you.

<u>Frederick Crebbs:</u> I would like to just briefly tell you Roanoke County's stand on this. My name is Frederick Crebbs and I'm a professional engineer in North Carolina and soon to be in Virginia. I work for the utility department for Roanoke County. Our stand is really short and sweet. We feel that the treating facilities in package systems as well as maybe home units should meet full requirements of discharge and the county really doesn't care to monitor these systems because of the complexity of doing that and would like to leave the responsibility up to Virginia if this is something that will be approved. Otherwise, we believe in the regular treatment plants that are municipally owned and then would be municipally monitored and comply to all the regulations.

September 12, 1989
Wytheville, Virginia

Kenneth Ryan: My name is Kenneth Ryan from Abingdon. I'm concerned about the individual sewage disposal system in homes called package units that would be above ground or inside the house. I understand that the State has had now 10 years experience with that system and while that's over a longer length of time than my experience, I can't understand why they exist as a unit in the home. Perhaps it would help if I could understand so I'd like to ask several questions about the unit. What was the decision making factors that allowed them to be used 10 years ago when they were approved by the Health Department? Are there other states that permit the use of the package system? The only experience that I have had with those systems is on United States Merchant ships which are monitored by the U. S. Public Health Service and the Coast Guard.

It wasn't long after they started installing those on the ships that it was pretty apparent that somebody allowed a bucket of worms to come on board ship because they are a source of trouble. The first compartment has a pump that periodically stirs up the solids with the liquids and the seals go. The application in the third compartment of the chlorine - chlorine is tough to handle, you're using your capsules. We used the liquid, it was almost impossible to maintain the hardware because of the errosive nature of the chemical. In the meantime, in the compartments in between, the amount of metal in there was such that it wasn't long until there was a complete collapse of the metal between the stages and that meant that the system just couldn't possibly work and the automatic controls were a problem. Now this is where you had round the clock licensed personnel operating that equipment and it still was a problem and so 10 years later, you're still talking about how you're gonna make these systems work.

I don't think that these systems are practical either and from the information you have here, it appears that they are not practical for the reasons that I perceive plus ones that I hadn't even thought of in your bulletin but it still appears that you are going to go ahead with these things. It is pretty obvious to me they ought to be condemned. It was a bad mistake 10 years ago and it's only going to get worse if you keep up with it. A mechanical device that's left in the hands of people who even though laws are passed to prevent them from discharging trash along the road and they still litter. So apparently it isn't going to be that much of a litter because nobody is going to see what comes out of the pipe anyway. But it sure would be helpful to me to understand why they went to this system because I am at a lost to know and I had hoped to find that out when I came to this meeting tonight.

Ronnie Coake: Rick, I'm Ronnie Coake from Pulaski County and from time to time, I see notices come through on a NPDES permits. I am concerned about as many as they are all being placed around by Clayton lake and the thought that proper operation and maintenance would not be provided to them and the discharge would be going into the lake. I mean most of the time you probably find that's where it's going to be located in an area

that the State would go through the trouble to install a system like this. One last thought, the recommendation of local government take over the responsibility for them - I just don't think that the local governments would have the resources to go around and accept responsibility for these single family units. That's all I have.

Tom Taylor, Mount Rogers PDC: I think I understand why the State decided to start permitting these individual systems. I really think it was a pretty good idea to go ahead and allow people to build homes and purchase land that could not be approved for septic tanks. I do realize that there is a maintenance problem and what the answer to it is, I don't know and it may be that the laws need to be changed to allow a service authority to assume responsibility of the maintenance. But for that to happen, I think there should be incentives for an authority to do that. And if you are going to do these systems, why not allow our service authority to assume responsibility for maintenance of septic systems? You can't have people running to 10 places to cover a 580 sq mile county to see that 10 systems are operating. If you could identify areas in which there are septic tanks and allow service authorities to start charging a fee for regular inspection of the septic systems along with these systems then it might be something that could pay for itself and still protect the streams.

I have the same problem that Ronnie spoke of with NPDES permits. I been seeing a lot of them lately. The Regional Planning Commissions are required to review these NPDES permits and VPDES permits for communities or their reapplications for permits as well as these individual systems and to test their compliance with the adopted water quality management plans. I'm the only one left on our staff that knows what the water quality management plan is much less, what's contained in it. As a result, in order to try to respond to citizens coming in the door wondering why in the heck am I here, why did I have to drive 50 miles to this regional agency to get a permit or something for my home. You know, we try to make it easy as possible and we try to take care of matters that come in the door. They also are providing three copies so that the other stops they have to make they will have to leave a copy with somebody else but there is nobody paying for that.

This is getting to be a problem for us because the State has held the funding for county duties in our particular case because they are doing it on a per capita basis and population has been level for the last 10 years. Inflation has eaten us up. Our former president was able to reduce funding from federal sources by about 74% over the past 8 years and inflation is eating us up. Again, we're being ask to do these same things by the federal government and the state government and nobody is going to pay for it. Everytime I ask for additional funding, they say what are you going to do. We just need additional funding to keep up with things that we have been doing or should be doing. So money is very important here. Either we are going to have to start charging the actual cost of processing the request for a permit to the Department of Health or to the State Water Control Board or the permittee, or refuse to do it. I think there is a valid reason for doing this - the formation perhaps is most cases there is a problem as far as compliance with the water quality management plan. We really don't have any way to make a decision on the impact on water quality. I think that there are really some problems. The impact on septic tanks and the package plants on streams and the State

Water Control Board and the EPA's policy are given a 100% loan. I think I have to concur, but I just don't think it's gonna work.

Ron Coake: Really just one other thing on the package sewage treatment plant. Rather than somewhere down the road, the local government having to take over that facility, I think there needs to be some kind of assurance required from the developer that the plant will continue to be operated. Some developers develop it and take the profits from it and then leave it for everybody else to assume the responsibility of operating it.

Kenneth Ryan: I would like to comment on the difference between the State of Virginia's etiquette towards the use of land that otherwise wouldn't be useable because of lack of drainage facilities suitable for a normal septic system and other states. In New Hampshire, in Munsunville, 12 miles North of Keen, there is a gradual slope toward Granite Lake. It's a heavily wooded area. There was building proposed on that land and when they excavated, they found there was insufficient soil between the surface and the rock beneath and therefore, building was prohibited. It stays a wooded area and the people that owned that, who had other plans, tough, they got land that you can't put a septic system in. In New Jersey, if you don't put a septic system in where they tell you and how they tell you, it doesn't get approved. Tough and there is an awful lot of area in New Jersey that's that way, in that condition because they have a lot of tidewater land. I suppose the Eastern Shore here has a similar problem but the point is, from where I see it, it seems like the state is going out of their way to make it possible for people who have marginal land to be able to build there and even at the expense of the aquifer and I'm wondering whether they shouldn't take a better look their priorities and say no, we can't build anymore. I'm reminded of the potatoe farmer, I was telling Mr. Newman about. In the rural valley in Holland, the Surine River Valley, the chap has a potatoe farm and it will never be anything but a potatoe farm and if his house gets too old, it probably won't because it's stone, but he can't build another house until he tears that one down because they figured the land has absorbed all of the people that it can. Now, if that's the case in Virginia, then the cities will grow and then you will adequately manned sewage disposal systems that are sufficiently high tech that they will be able to operate and discharge drinkable water but that these individuals sewage systems are far from that and what I don't understand is why is it in Richmond, they are so anxious to make all this land useable to a degree far more than the other states that I have observed?

September 14, 1989
Franklin, Virginia

Q: Are these facilities permitted from a secondary treatment stance?

Q: What is the life expectancy of these units?

September 28, 1989
Woodstock, Virginia

Robert Parker: My name is Robert Parker. I'm president of Multiflow Waste Treatment Systems, one of the aerobic systems in the country. We've been in business since 1970 and the product was developed as it is now currently marketed and was tested at NSF and we're proud of the product. I do not stand up here and profess to be a representative for industry, but I will, as I go along, make an offer that I think I can extend to you as a member of industry. I noticed in reading through the draft and the papers were there issued tonight that there were 3 choices to solve on-site problems. We have the pump and haul, sand filters and waste treatment units. Excluding our counting out the unlikely use of pump and haul systems which would be cost prohibited, I'd like to state that I don't see many things in the proposals to regulate the use of sand filters and it seems very slanted towards the operation and maintenance of small package plants. There are quite a few accusations in the proposals towards these single family home systems which as some point in time, probably should be discussed with the proper people. It also does not really bring out the problems that can arise with the use of sand filters but does bring out problems that can arise with the use of single family home systems. I'm not going to stand up here and say what has been said before about package plants - that no maintenance is required, that is not a true statement.

I'll be the first to admit that I believe the State of Virginia is on the correct path to write a regulation for proper operation and maintenance. I will stand here tonight and tell you that the first person who will neglect the operation and maintenance is the homeowner if he has a chance, unless he is regulated. Now I'm not saying that's a hundred percent across the Board because there are some people who do care about the environment but some people will ignore them. They are an expense and it is a necessary evil to clean up our environment and it does cost money. I believe that industry should be given the opportunity to help you solve this problem. We've been around only since 1973 in the marketplace. The company was started in 1970. There are other competitors out there who have been around a lot longer. We have a representative here tonight from Jet Aeration whose been around a lot longer than Multiflow. This is not to say that I'm up here to plug anyone's product but we've been through the tough times. We've seen states adopt the use of these systems carte blanc without any regulations and there has been problems. We do need to get about setting a program to allow these systems to go in properly and to be maintained at an economical level.

What I see in these regulations to monitor these units on a monthly basis for the first year and for the test to be run on a monthly basis for the first year, I find to be ludicrous. It is not necessary. These plants, these single family home plants are being treated like big package plants which are really a problem to operate. These plants are pre-engineered, they have been tested by the National Sanitation Foundation in accordance with Standard 40. They are not operator sensitive. They are no subject to the same upsets that a package plant is subjected to but they must be maintained. I'm saying that I don't believe the burden that is being put on these single family home plants is fair, but I'm saying that a modified

plan should be adopted so that these plants are treated so that the homeowner can use this as a viable cost effective alternative to the septic tank and drainfield.

I also want to make it clear that we do not compete with septic tanks and drainfields. If a homeowner or property owner can put one in and it will work, God bless him, have at it. It's the most viable thing to do but that's not why we're here, we have problems. Just a little bit about the industry. I'm going to skip a page here to make this a little briefer, I was going to pick on sand filters but I'm not a sand filter expert so I won't talk about it. The industry does have a standard, under Standard 40 which is tight. I would suggest that you, you already have adopted the use of NSF standard plans only. I would suggest that you continue to utilize these plans and only Standard 40 plans so that you don't get into a problem like other states, Mississippi, Louisiana, Alabama, Texas and so on; and you neighbor down the street here, North Carolina who is struggling with a couple of non NSF boys trying to get in. They have just adopted a code for the use of these systems which was suppose to be Standard 40 only plans. I would say that you ought to lean on the National Sanitation Foundation. Believe me, they got their hands in my pocket. I pay a fee and they monitor our systems on an annual basis and we have to carry the seal on these plants and we have to do certain things which I'd be glad to share with anybody at a later date.

Just a few ideas that other states have used for controlling these systems: bond the dealer; register the dealer with the state and the county; make sure that the dealer that is authorized to put these units in only cover a hundred mile radius within any given installation so that they can get there within a reasonable amount of time to provide service; set up a permitting fee possibly on an annual basis; and an annual operating fee to the homeowner which would bring monies into the county to administer the program. This is a problem, as this is not going to be cheap and I would suggest you do the same thing for sand filters. Reduce by all means, as I suggested, the testing protocol that you've outlined that you are subjecting the single family home units to; stick to NSF only; allow NSF an industry to train the county and the state people, because I've seen it in too many states where these county people don't even know what they're looking at.

In this study here, in the first couple of pages, it refers to how a study was done in Loudoun County and some units were looked at and that raw sewage was running out on top of the ground and I'm here to tell you, some of those units were Multiflow. Those units were not malfunctioning from a treatment standpoint allowing raw sewage to go into the creek, those units had a sudsing problem. A start up problem, it was coming out underneath the lid, but it wasn't going in the creek. Some units package plants, 20,000, 50,000 gallons per day, they'll go birp and it goes in the creek. We call that a bypass system as opposed to a no bypass system. Again, you got to know what you're looking at. We need to education and continue to educate the counties and the state on these systems so that short cuts aren't taken so that the proper units are installed in accordance with what was tested at NSF and so on. Let us help you. Let industry get with somebody before these, if you care to, if the doors open, to discuss this. We're here to help you. You've heard that before. No, we seriously are here to help you in any way we can. We've been there. We currently market

products in about 20 states. We know the problem states. We know the states that have good programs. I would suggest that the State of Virginia people talk to some other states that have good operating programs to clear up some of the things I've said. Thank you very much.

Phoebe Orebaugh: I am Phoebe Orebaugh, a member of the Virginia General Assembly. I represent the 27th House of Delegates District which is Harrisonburg and most of the County of Rockingham. In my district as in many other parts of the Shenandoah Valley, the soil is not very suitable for conventional septic tanks and drainfields, yet we are a very rapidly growing population so there is a really pressing need for the small package treatment systems or some alternative to the conventional system. Now, from everything I've been able to learn about this situation, the problem is in the maintenance. Obviously there is a need for somebody to inspect these small package treatment systems to see if they are being properly maintained. My own preference would be for continuing contracts for maintenance to be required of the homeowners but I understand that there are some problems with those. So, if that's not feasible, then obviously, it's going to have to come down to either the local governments or the State Health Department.

You are not going to like to hear this Dr. Tenny but my own preference in that situation would be for the regional officers of the Department of Health to do the inspection for a number of reasons: (1) they do have the experience, the expertise to get a system in place quickly and something does need to be done fairly quickly. Secondly, some of the localities do not, as of yet, have enough of the small package treatment plants to warrant the hiring of a sanitarian. They may some time later but at this point, I don't think that they have. Perhaps the Health Department could furnish some of the materials used or at least, I'm sure they will have to be buying some of the things that will be needed for the inspection and it seems to me that they could probably operate more efficiently on a more cost effective basis than the local government. Lastly, the local governments really seem to be strongly opposed to doing it and if they really aren't interested in doing it, I'm afraid that they won't or at least they won't do it in a timely manner. Now, I realize some of the problems that the Department of Health has in doing this, the regional offices anyway. They have no system for collecting fees. Everybody seems to agree that it should be paid for out of fees charged to the homeowner. I can see that is a problem but I think it could be worked out. There ought to be some mechanism so that the homeowner could pay the fee to the Department of Taxation. The Department of Taxation could then forward the money to the regional office of the Department of Health to pay for the sanitarians. I also realize that the regional office does not have anyway of enforcing compliance with homeowners who are refusing to properly maintain their systems but again, I think the sanitarian could surely notify the local court and the court could carry out the enforcement. As I said, we are growing rapidly. We need something to be done and to be done quickly and I really do hope that this issue doesn't become a sort of political football thrown back and forth between the state and local governments and that something is done and done very quickly to solve the problem. Thank you.

Debbie Hinton: I also have some questions along with my statements tonight. I want to address them to the Health Department and the Water

Control Board representatives that are here tonight. I will send them to you in writing because I keep adding to them and I would request some answers at that time. We have talked tonight about the responsibility of who will maintain and operate or sample, who will have the responsibility of the sand filters and also the mechanical extended areobic systems. The State Water Control Board, I feel that they should make themselves available to the public, to the government agencies, to the Health Department people for training and also for education purposes. We have talked with the Board of Supervisors and our local county government in Rockingham County and also in Augusta County and we have found that the people in our local governments are very unaware or uneducated as far as what the mechanical systems are, what they can do and what we can expect from them. We had onsight demonstrations for the County Board of Supervisors in Rockingham first and then in Augusta and when they came out and when Mrs. Orebaugh came out and saw a system, they were very surprised at what they saw. When I went down to the effluent pipe to get a sample, two of the supervisors went back down because they thought I'd gotten the sample from the creek. I think that the big picture, or a big problem in the situation is ignorance with homeowners, no offense guys, but with our local governments. I don't think that a viable solution would be to put anymore responsibility on these people.

When we apply for a permit, and I have assisted with approximately 25 to 30 permits over the last couple of years. Let me back up, from 86 thru 88, I processed or filled out applications and helped assisted homeowners with obtaining their VPDES permits. When they are issued these permits or when they apply for these permits, I feel that that is the time the homeowner needs some education. The permits are mailed to them from the State Water Control Board. A lot of the people have no idea what's in them, they don't take the time to read them and so they are very uninformed and lackadaisical and don't assume any responsibility for them so I'm not exactly sure what the State Water Control Board feels their role is in this program.

I'm not sure exactly what the Health Department's role is in this program. I've had lots of questions over the last 3 years. I've gotten very few answers and almost no answers in writing. So it's basically hearsay. I have been told go ahead and apply for the permits. I've been told we can't apply for the permits because we have moratoriums. As a representative of homeowners and people who are interested in applying, and there is a lot of interest in the market out there, I would like to know exactly where our stand is on them. Are we closed down at this point with mechanical systems, with new permits or under what policy are we operating. I need something in writing that I can see that I can read because when I have one agency telling me this and one agency telling me that, I get very confused. So, that would be one of my questions - exactly what policy are we operating under or not operating under and is there actually a moratorium on them at this time?

The position paper that we were given tonight states that there are 111,828 failing septic systems in Virginia. I do not have any idea what percentage of total septic systems in Virginia this is and I would be interested in how big a problem this is with us. Whether we're talking a minor number or a large percentage because maybe we need to address the whole septic system with the standard convention septic systems. One of

the other things that I want to talk to you a minute about is the application process for the permits. They are not extremely complicated but the permit applications are set up for the larger treatment plants, like the regional treatment plants, the city plants, this type of thing. They are not set up for an individual homeowner and I would like to recommend a simplified permit process with a unique application for the homeowner. As part of that, I think there should be educational material and education time for them. I think there should be a sign off for the homeowner that they realize that they do have responsibility and I think that the homeowner should see it as a privilege to be able to have one of these type of systems. If it means the difference as to whether you can build where you want to build, then that is a privilege. I think we need to assume that responsibility. The other question that I have goes back with one of my previous questions - Does the State Water Control Board foresee in the near future that we will once again be able to submit applications and get on with this? I will send you a copy of this.

Q: From the time you make application for your permit to the State Water Control Board or the Health Department for this mechanical system, how long should I have to wait before I would be issued a permit, would it be 6 months?

Q: Does State Water Control Boards take 120 days to complete the application in the state government? Can you tell us just what they do in those 120 days?

: My recommendation for a new permit process or a new application for the homeowners, for the individual homeowner permits, if EPA ever approves that we can go that route, would a non State Water Control Board employee be allowed input in that or to work on a committee to draft that?

Debbie Hinton: You had said that the permits don't specify the hardware. All the permits that I have, I have been told when I make the application, I either have to state whether it's sand filter with pump and with plans attached or that it's a mechanical system. When the permits come back, they do state for sand filter or for mechanical system. A problem we're dealing with now is with the Health Department saying we're only talking a couple of months here that we won't be allowing mechanical systems so go ahead and apply for a sand filter system, after you get your permit, we'll get it changed for you. So you guys from the Water Control Board know where we stand on that.

Rihikronich President, Friends of North Fork: I do not have a prepared statement. I complemented the Health Department for what I thought was an excellent draft of regulations that would be imposed upon the state. I think we have a particular problem here in this area where we have terrain that is very susceptible to pollution. Also where we have unfortunately terrain and geography that does not take the conventional septic disposal system. I think there is really only two questions to be decided. One of them apparently hinges on a technical fact or absence of a fact and that is - can certain of these mechanical systems be turned off and recharged instantaneously? I have reviewed several manufacturers brochures on this and I have not yet found one that does not take some time to recharge. I think that it was on this basis that the Health Department

inserted into their proposed draft regulations the proviso that these mechanical systems do not be permitted for weekend cottages and where they would be intermittantly turned on and off or where they were not fed.

I think the other question that is of concern, and I sense that we're all agreed even you industry people are agreed that there has to be proper maintenance and monitoring of these systems. I think we're all agreed to that. The only question is whose going to do it and who is going to pay for it? I sense that there is probably agreement in most communities that this should be a user fee and the landowner who is putting in the installation should pay for it. The question then is, who should make sure that it is operated and maintained and monitored properly? And I think here it's sort of frivilous to say well it should be either the Health Department or it should be the Water Control Board. I think you should pin this squarely on the donkey which is the local authorities. If you read this draft carefully, it indicates that the local authorities don't have to get out and do it themselves. In other words, I agree. I think everybody agrees. Very few members of our Board of Supervisors, at least in our county, would have the capability to go out and inspect the mechanical system or even a sand filter system but I think that the draft, as it now stands, or the regulation as it now stands, would provide that the local authorities would take the responsibility to see that they are properly maintained and monitored. It doesn't mean they physically have to do the work. They can hire somebody to do the work. I don't think this is a problem beyond the capabilities of our local authorities. I would like to see the local authorities assigned or provided with this responsibility. I think that turns out to be option 5. Thank you very much.

William Veno: I'm Bill Veno, director of planning with Rockingham County representing the Board of Supervisors for Rockingham County. The Rockingham County Board of Supervisors does not think it is appropriate that localities be responsible for monitoring individual package treatment systems. Since such systems discharge into state waters,they should be regulated by the state. While the state does not feel it has the resources to provide monitoring, localities have even fewer resources. If it is felt that VDH must be the agency to check the installation of package systems, why does it suggest that localities can then monitor them. If it is also the State's rationale that since localities have an economic incentive for the success of these systems, does the localities not also have an economic incentive to perhaps not be as strident in their monitoring of these systems. That's about all that I have to say.

Q: You said awhile ago that not everywhere in the state that there was a moratorium on the mechanical systems, where can you still fill out the applications and install mechanical systems since last August?

Unindentified Speaker: I'd just like to add a comment about the choice of a monitoring agency. That this is a concern and understanding of what's involved in public health as Mr. Tenny has stated is a Health Department concern. I don't think that the reasoning in this discussion paper that somehow the local governments if they are not the ones who will monitor these things will use this as away of getting around providing centralized sewer systems. I just don't think that that's even an issue to encourage

the use of these systems in the kind of density that would be required in the same sort of situation that would maintain a real centralized sewage treatment plant economically viable. It's just crazy. That is a strong word but do you understand what I'm saying? If you can have that kind of density that would make a centralized sewer system possible, you would never do it on this kind of system so to say that that's a reason for placing this responsibility on local government it's just silly in my opinion.

The other thing that is stated in this argument is that if the State starts monitoring the individual single family homes, mechanical systems are going to wind up with a larger package treatment system. That's equally silly. The State now regulates septic systems and there is no plan in my awareness by VACO or VML to trick the state in taking over their sewage treatment plants. I mean that does not follow and if there is a good reason for local government to regulate these things, I'd like to hear what it is because these things just don't hold up. It seems to be that if the State has qualified sanitarians who understand their business, that they are dealing with septic systems, they can also deal with these other types of systems. The monitoring, if that has to be done and contracted out to private companies, I think that would be supported by a vast majority of people in this Commonwealth. That could be done through licensing procedures through the Health Department or some agency of the State.

There is absolutely no reason I can see that any of this discussion or any of the considerations that I've heard of this subject to put this on local government. Local government is universally across the state is stressed and strained and every time something else comes, you push the local governing bodies that much further and you hear it as another state mandate. Another thing, an important thing about local governments doing their job well is to feel that they have had some say in what they are, in what areas they are administering and for the state to continually say thou shalt do this and thou shalt do that, it only leads to resentment, bad feelings and improper monitoring of programs. I think we've seen this in other areas which I won't mention but I think we are probably all aware of that we can't do anything about the State Water Control Board's concerns. There are plenty of programs mandated by the State. Localities responsible for amending and monitoring them, it just doesn't get done and a lot of it has to do with this idea of you're going to do this whether you want to or not. There seems psychology involved also. I think everybody's primary interest and responsibility is for the public health in this regard. It should not become a game of who can get who to do what. Let's have the people who are trained to administer this terrain, take responsibility for it and if it requires a user fee, I'm sure the State will figure out a way to collect. Thank you.

APPENDIX D

WRITTEN COMMENTS

Route 1, Box 90
Stephens City, VA 22655

October 2, 1989

Ms. Lori A. Freeman
State Water Control Board
Office of Policy Analysis
P. O. Box 11143
Richmond, Virginia 23230

Re: Senate Joint Resolution 161

Dear Ms. Freeman:

My husband, James E. Ash, and I have an approved NPDES permit for installation of a sand filter system to be installed on a 62 acre tract in southern Frederick County. The purpose of this letter is to voice our opinion regarding the issuance of these permits and the type of systems allowed by the permits.

While we were desirous of purchasing a Norweco aeration system which is approved by the State Water Control Board, we have been prevented from doing so by Malcolm Tenney. He has taken the position that he will not approve the aeration system, despite the fact that it has been approved by the State Water Control Board. We question his authority to even take this position, but that is another problem altogether.

Our purpose in responding to your notice of a public meeting is to let you know that there are people who want to purchase aeration systems and are being prevented from doing so. Further, the majority of the people wanting these systems are, like us, conscientious citizens of the middle or upper income level who can afford to buy acreage in rural areas. We too want a sewage disposal system that works properly -- which the sand filters do not always do. We can afford and are willing to pay a reasonable fee for regular maintenance checks if that is what will be required in order to allow installation of an aeration system.

It seems ludicrous to prevent a landowner from building just one residence on a large tract of land and installing an aeration system based on the premise that we could perhaps pollute our public streams and rivers -- AND YET TURN A BLIND EYE ON AVTEX FIBERS FOR OVER 40 YEARS. Let's keep things in perspective and be reasonable. We are reasonable citizens and wish to be treated reasonably.

Sincerely,

Carolyn B. Ash

ca

HANOVER COUNTY
P.O. BOX 470
HANOVER, VIRGINIA 23069-0470

September 15, 1989

Mr. Richard Burton
Executive Director
State Water Control Board
P.O. Box 11143
Richmond, VA 23230-1143

Dear Richard:

I am enclosing Hanover County's position on the draft discussion paper in response to Senate Joint Resolution 161 of 1989.

Thank you for considering these remarks as part of your public hearing process.

Sincerely,

Richard R. Johnson,
Deputy for

Allan T. Williams
County Administrator

ATW:bjc
cc: John Stockton
Reed Barrows
John Hodges

HANOVER COUNTY
P.O. BOX 470
HANOVER, VIRGINIA 23069-0470

DEPARTMENT OF PUBLIC UTILITIES
MEMORANDUM

SUBJECT: Amendment to Eastern Virginia Groundwater Management

TO: Chairman VWCB

FROM: County ADministrator, Hanover County

DATE: September 15, 1989

Please enter into the record Hanover County's comments on the draft discussion paper (response to Senate Joint Resolution 161 of 1989).

While we share the concern over the proliferation of small treatment units, we do not feel the option to require counties to assume operation and maintenance responsibilities for certain small plants is well thought out. There are other plants, such as public schools, Highway and Correctional Department facilities, and church-affiliated private schools, which have not been included. We are aware of no statutory authority to assume the operation of these plants. Further, without owning the systems, Counties have no means of requiring necessary plant modifications to be made.

In short the option to shift the burden of assuring compliance with discharge permits from state to local government leaves the local government with responsibilities that it does not have the necessary authority or funding sources to carry out.

We recommend the option be dropped from further consideration.

HANOVER COUNTY

Richard R. Johnson, Deputy on

Allan T. Williams
County Administrator

Route 1, Box 393A
Winchester, VA 22601
September 13, 1989

Lori A. Freeman
State Water Control Board
Office of Policy Analysis
P. O. Box 11143
Richmond, VA 23230

Dear Ms. Freeman:

I understand that you are reviewing small waste water packages and ways to maintain the proper operation of these systems so to meet State code. I, for one, have successfully applied for an N.P.D.E.S. permit and have not yet installed a sandfilteration system in pending the hold in Frederick County, Virginia, on these types of systems.

I have located an alternate system manufactured by Norweco Company, and installed by The Stone Company in Roanoke, Virginia that either meets or exceeds any and all limits set by State or Federal Laws.

The Stone Comapny offers a service contract to make sure the system is working properly and is in complete compliance with the limits specified. As you review your options on how to keep a check on the small systems, I suggest the following:

1.) Let the installer do your monitoring for these systems by only letting them install these with a service contract.

2.) Require the permit holder to produce the name of the systems manufacturer and the company that is installing it in addition to a 5 to 7 year contract. This should make the monitoring the installer's responsibility. The installer could send the State Water Control Board a copy of how the system tested, the permit holder's name and permit number every 6 months.

I hope you consider these ideas and options.

Sincerely,

R E Wilkins

Ronald E. Wilkins

REW/vlb

Rt. 1, Box 298
Dayton, Va. 22821
September 16, 1989

Lori A. Freeman
State Water Control Board
Office of Policy Analysis
Box 11143
Richmond, Va. 23230

Ms. Freeman:

Please schedule Mrs. Phoebe Orebaugh to address the meeting at the W. W. Robinson Elementary School Gymnasium on September 28, 1989. She is a member of the Virginia House of Representatives. Also, please schedule Debbi M. Hinton to address the same meeting.

I attended the meeting held at Warrenton on Monday, September 11, 1989 and was disappointed that the gentleman from the SWCB was not more aware of the situations involved and appeared not to have grassroots experience with these systems or with the problems that homeowners and developers are facing at this point.

The intent of this complaint is not to embarrass the gentleman, because I honestly believe he was only performing as instructed. However, I am not patient when progress is halted and precious time and money are wasted with uninformed and unprepared meetings.

If one of the options is seriously to let the local governments be responsible for any part of the monitoring and/or maintenance of these systems, all local governments should have been notified of the meetings and forwarded copies of the SWCB Draft Discussion Paper in Response to Senate Joint Resolution 161 of 1989. The County Administrators with whom I have spoken, were not aware of the meetings or of their suggested option of responsibility.

Another suggestion for the meeting at Woodstock is that your office notify all health department officials in the region of the pending meeting.

Please consider a full-day meeting with all the members from the SWCB, the Health Departments and anyone else who was on the task force to draft the policy which was sent to Ms. Mary Sue Terry's office in March, 1989. I feel that we, the public, have every right to hear the official point of view of these members. I also believe that a public forum with this task force would clarify much of the communication problems which we are now experiencing.

Please consider these suggestions and forward them to the appropriate department chairpersons for implementation.

Sincerely,

Debbi M. Hinton

Debbi M. Hinton

Water Pollution Control Plant
Steven L. Walker, Plant Manager

1402 Bennington St., S.E.
Roanoke, Virginia 24014

September 13, 1989

State Water Control Board
Ms. Lori A. Freeman
P. O. Box 11143
Richmond, VA 23230

Dear Ms. Freeman,

In response to the public meetings on Joint Resolution 161, the City of Roanoke requests that any package treatment plant located on the Roanoke River meet the same discharge parameters as the City. The City is required to meet these standards due to the Water Quality Standards of this river. In light of this, the City feels all discharges into the Roanoke River should be treated equally.

Also, the City of Roanoke is opposed to quarterly monitoring of package treatment plant discharges. Quarterly monitoring increases the potential for unmonitored pollution and it is unfair for the dischar-ers who monitor their effluent on a more frequent basis. The Roanoke discharge is monitored hourly.

Please file these comments. If you have any questions please contact me at 703-981,2406.

Respectfully,

Steven L. Walker, Manager

SLW/ike

COMMONWEALTH OF VIRGINIA
HOUSE OF DELEGATES
RICHMOND

PHOEBE M OREBAUGH
139 S SUNSET DRIVE
BROADWAY VIRGINIA 22815

TWENTY-SEVENTH DISTRICT

COMMITTEE ASSIGNMENTS:
EDUCATION
ROADS AND INTERNAL NAVIGATION
CLAIMS

STATEMENT OF DELEGATE PHOEBE M. OREBAUGH

Members of the Committee, I am Phoebe Orebaugh, a member of the Virginia General Assembly. I represent the 27th House of Delegates District, which is made up of Harrisonburg and most of Rockingham County. In my district, as in many others in the Shenandoah Valley, the soils in many places are not suitable for septic tanks and drainfields. Therefore, alternatives to this conventional sewage treatment system are needed.

I understand that the problem with the alternative treatment systems is that they are not always properly maintained, thus posing a threat of pollution to ground water as well as other health hazards. Obviously, either state or local officials need to set up an inspection system to ensure that the systems are maintained. Unfortunately, it appears to me that neither wants the responsibility, although both groups agree that the inspections should be paid for from fees charged to homeowners installing the small package treatment systems.

I propose that it be done by the regional Health Department offices for the following reasons:

1. The Health Department has the experience and expertise to get a system in place quickly.
2. Individual counties may not yet have enough small package treatment systems to justify hiring a sanitarian.

3. The regional officer may be able to effect some economies in purchasing because of buying in larger quantities.
4. Local government officials appear strongly opposed to assuming this responsibility.

I realize that the regional offices of the Department of Health lack a system for collecting fees from those who install small package treatment systems, nor do they have a means of enforcing homeowners to comply with proper maintenance requirements. But these problems could surely be worked out by state and local officials working cooperatively. For example, the State Department of Taxation could handle the collection of fees and send the money on to the regional Health Department offices, to enable them to hire additional sanitarians. The sanitarian could notify the local courts when a homeowner refuses to properly maintain his system, and the Court could then enforce the regulations regarding maintenance of the systems.

The northern part of the Shenandoah Valley is growing rapidly in population and there is a tremendous need to solve this problem quickly. I sincerely hope that officials will move quickly to do so and not let this issue become a political football tossed back and forth between state and local officials.

# # # # #

City of Virginia Beach

OFFICE OF THE CITY MANAGER
(804) 427-4242

MUNICIPAL CENTER
VIRGINIA BEACH, VIRGINIA 23456-9002

September 26, 1989

Lori A. Freeman
State Water Control Board
Office of Policy Analysis
Post Office Box 11143
Richmond, VA 23230

Re: State Water Control Board Public Meetings - Senate Joint Resolution 161

Dear Ms. Freeman:

The City of Virginia Beach submits the following comments on the need for alternative disposal systems and the management of those systems.

In Virginia Beach there are major areas of high groundwater and soils that will not permit traditional on-site septic tank systems to function. In an attempt to deal with these problems, we have developed land management techniques in cooperation with the Health Department. These land management techniques have allowed development of land that could not be developed with conventional systems.

In southeastern Virginia, there are unique features which warrant special consideration. In recognition of the uniqueness of the area, the Commonwealth established the Hampton Roads Sanitation District many years ago. More recently, the Southeastern Virginia Planning District Commission adopted a policy concerning wastewater disposal. This policy supports the use of on-site septic systems only where soils and development patterns are suitable. The City has also adopted that policy. Attached is a copy of Virginia Beach's policy on private sewage treatment facilities. Alternative systems such as package treatment plants are clearly discouraged.

On a state-wide basis, we believe that alternative on-site systems, including so-called package treatment plants, may be acceptable with specific controls and in specific applications. If they are to be allowed, then we believe consideration should be given to the following minimum requirements:

1. Design and installation of each system must be reviewed and inspected by a state agency.

2. The homeowner or operator of the system should have a minimum degree of knowledge and training in the operation and maintenance of the sewage system.

3. The system must be inspected on a regular basis to ensure compliance with minimum discharge requirements.

4. Discharges must be sampled on a regular basis, and the receiving surface or groundwaters must be routinely monitored by a state agency.

5. The responsible state agency, which we believe will be the local Health Department, must have sufficient trained personnel, laboratory facilities, and funding to support the program.

6. Owners should be required to provide a cash bond which can be used by local authorities to correct immediate problems in any system.

7. Local Health authorities should be empowered to collect an annual fee to support a program of inspection, monitoring, and necessary corrective action.

These types of management techniques will assist in allowing the use of alternative systems where they may be applicable. There should be special recognition of the uniqueness of many of the areas in the Commonwealth. As examples: the areas immediately surrounding the Chesapeake Bay, which will be impacted by the Chesapeake Bay initiatives; the southeastern region, including Virginia Beach with high groundwater, ill defined aquifers, and environmentally sensitive areas such as the Dismal Swamp and Back Bay; the limestone regions of the Shenandoah Valley, and areas surrounding water supply reservoirs.

Based on experience in Virginia Beach, on-site disposal systems are temporary solutions and millions of dollars are spent each year providing sewer systems in areas developed with septic tanks. Package treatment plants have a dismal history of meeting required performance standards largely due to operation

and maintenance problems. Private treatment and collection systems have been purchased by the City to reduce point discharges and reduce spills of wastewater from day-to-day operations.

We believe it is very difficult in our environmentally sensitive area to ensure that on-site systems, traditional or non-traditional, or package plants function adequately. In those areas of the City where central collection systems do not exist, we find high groundwater and hydric soils which will not permit high-density development. Consequently, most of these areas must rely upon on-site or alternative treatment methods. Unfortunately, most of these areas are tributaries to Back Bay or the North Landing River which are very valuable and fragile environmental resources. Recognizing our poor experience with on-site systems and the environment in which we live, we believe that any attempt to deal with on-site disposal systems must also allow for the prohibition of such systems on a local basis.

In summary, the application of alternative systems will:

(1) require significant increases in local Health Department responsibilities.

(2) generate a need for a funding source. User fees are suggested.

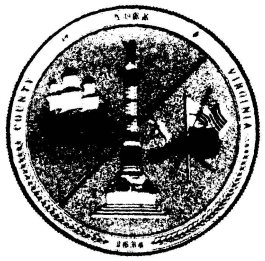
(3) require that the state develop regulations.

(4) require recognition of local environmental conditions which should prohibit traditional and alternative systems.

Sincerely,

Aubrey V. Watts, Jr.
City Manager

cp
pc: Clarence Warnstaff, Director of Public Utilities
Mary Morris, Environmental Management
Sharon Prescott, Environmental Health



COUNTY OF YORK, VIRGINIA

"Where Independence Was Won"

September 28, 1989

Ms. Lori A. Freeman
State Water Control Board
Office of Policy Analysis
P.O. Box 11143
Richmond, Virginia 23230

Dear Ms. Freeman:

In response to Senate Joint Resolution No. 161 requesting the State Water Control Board (SWCB), in cooperation with the Virginia Department of Health (VDH), to study the problems associated with on-site sewage disposal, it is York County's position that we oppose any effort by the SWCB to recommend that local governments ensure the "proper maintenance, operation, and monitoring of these systems." The draft discussion paper prepared by the SWCB staff lists this as a possibility to be considered by the Committee on Rules.

Our concerns with the administration of on-site treatment systems are several.

1. The typical homeowner has neither the expertise nor financial resources to provide adequate maintenance of the system.

2. The SWCB staff has noted that even with proper maintenance these systems tend to fail in less than 5 years.

3. Local government responsibility for these systems will place an increasing financial burden on local budgets at a time when such funds should more appropriately be spent on upgrading existing sewage treatment facilities.

4. During this time when the State is implementing the Chesapeake Bay Preservation Act, it seems contradictory to allow on-site sewage treatment units that have a high potential for contaminating groundwater and the tributaries to the Chesapeake Bay.

5. No financial assistance is proposed although the SWCB has suggested some funding options for small communities. It would appear that this is another effort by the State to impose requirements upon local governments, but with no attendant funding.

6. Localities vary in their ability to provide utility service. Generally, those least able to dedicate available resources to monitor these systems are the ones most likely to permit them with eventual pollution of regional rivers and streams.

The permitting of any discharge into State waters has traditionally been delegated to the Water Control Board. Any attempt to shift this permitting process to a local agency will set a dangerous precedent in the area of water quality management. State-wide environmental regulations should remain a State and Federal responsibility. We, therefore, request that the State Water Control Board carefully consider any regulatory recommendation that may impact local government responsibility.

Sincerely,

for Daniel M. Stuck
County Administrator

DMS:CST:ess

Copy to: Delegate Shirley Cooper
Senator William E. Fears
J. Mark Carter, Director of Community Development
Martin C. Fisher, Director of Environmental Services
William M. Hackworth, County Attorney
Barry Lawrence, Executive Director, VACO
James W. Funk, Chairman, York County Board of Supervisors
Richard N. Burton, Executive Director, State Water Control Board

County of Alleghany

COUNTY ADMINISTRATION BUILDING
110 ROSEDALE AVENUE
COVINGTON, VIRGINIA 24426

August 8, 1989

Ms. Lori A. Freeman
State Water Control Board
Office of Policy Analysis
P. O. Box 11143
Richmond, Virginia 23230

Dear Ms. Freeman:

This will acknowledge receipt of a notice concerning the six public meetings to be held by the State Water Control Board and Health Department concerning funding for small community wastewater treatment systems. I can assure you this is a problem for communities such as Alleghany County and we will hope to be present at the September 12, 1989 hearing in Roanoke to offer comments.

To give you an example of our situation, Alleghany County operates eleven water systems and ten sewer systems. The combined customer base for all twenty-one systems is 1,787 water customers and 1,580 sewer customers. Since the Federal and State wastewater treatment standards and construction costs are not based on such small systems, we and other communities like us have faced terribly high unit costs for systems that are too small to realize any efficiencies according to current standards.

For example, Alleghany County serves the small community of Westwood with water. The Westwood community is also very much in need of sewer service because of failing drainfield systems. However, with a total of 40 homes and a maximum currently foreseeable customer base of 47 homes, neither the residents, nor the County can afford the cost of putting in a central system. The lowest cost system of which we are presently aware would be a massive drainfield with small collection lines using existing septic tanks. This system would cost $340,000.00. If Westwood is connected to the City of Covington, the total cost would be $555,200. As you can easily see, if there is absolutely no debt service cost (i.e., the project is financed with cash or a zero interest rate loan) and no operating cost is computed, the capital investment would still run from $8,500 to $13,880 per dwelling based on 40 dwellings served. This cost would go even higher if, as we would anticipate, some homeowners decide not to connect. For example, if only half the homes are connected, the per dwelling cost of sewer service would range from $17,000 to $27,760! Faced with these kinds of numbers, we have told some of the residents in the community, only partly in jest, that if they wanted a central sewage disposal system, they would probably have to take a second mortgage on their homes!

Ms. Lori A. Freeman
State Water Control Board
Office of Policy Analysis
P. O. Box 11143
Richmond, Virginia 23230
August 8, 1989

Alleghany County is very interested and concerned about the problem in small communities or service areas such as Westwood, since we have several such areas. We need new cost effective answers to give practical solutions in such situations. We urge the State to develop some pragmatic answers.

Please advise if we can provide additional information which might be helpful.

Sincerely,

Macon C. Sammons, Jr.
County Administrator

MCSjr/kjd
CC: Dr. Molly Hagan, Health Director, Alleghany Health District
Mr. Richard Burton, Executive Director, State Water Control Brd.

NVBIA
NORTHERN VIRGINIA BUILDING INDUSTRY ASSOCIATION

The NVBIA Building • 12801 Fair Lakes Parkway, Suite 100 • Fairfax, Virginia 22033 • (703) 968-7352 • FAX (703) 968-7814

October 4, 1989

Lori A. Freeman
State Water Control Board
Office of Policy Analysis
Post Office Box 11143
Richmond, VA 23230

Dear Ms. Freeman:

On behalf of the Northern Virginia Building Industry Association, I write to submit comments on the SJR 161 study regarding small package sewage treatment plants. As you know, NVBIA is composed of approximately 1400 members, a number of whom are experienced in the technical aspects of sewage disposal as well as thorough knowledge of the state and local requirements for such systems. Our membership also includes a strong representation of engineers and attorneys, who enjoy nationwide reputations for their expertise in the field of land use and development.

Central sewerage systems are, of course, preferred; however, in many areas such systems are not available or practical. When soils are suitable, conventional septic tanks and drainfields have proven highly reliable and cost effective. When soils are marginal or unsuitable, alternative systems may be considered.

In general, we feel that these facilities should kept as simple and maintenance-free as possible. Treatment levels on low-tech conventional septic systems are usually as good as the higher priced and less reliable systems. Low pressure, mound and STEP (Septic tank effluent pumping) systems are usually manageable even by individual homeowners. The more exotic systems should be reserved for use as a last resort, possibly limited to the replacement and repair of malfunctioning systems.

It should be noted that in recent years, state and local authorities have been adopting increasingly stringent regulations pertaining to conventional septic tanks and drainfields. While these regulations add a measure of safety and reduce the number of septic field failures, they also severely restrict traditional uses of rural properties with marginal soils.

Operation, management, and government oversight are particular problems for small sewerage systems. Public ownership is preferred, whether by municipality, sanitation district or authority. Some private companies are capable of managing large and small systems. Many of these companies own the systems, but some also contract their expert services to government entities or home-owner associations. Again, government involvement would be preferred. The private companies are regulated by SCC, the Health Department, and in some cases, through local regulations. The Health Department requires that the operations of community systems be licenced. Perhaps this requirement should be extended to small and individual package treatment systems.

Operation of complex sewage systems by home-owners associations and individuals is not generally desireable. These entities do not have the training, experience or resources to assure maintenance and safe operation. In addition, it is unreasonable to ask state and local officials to try to oversee such operations.

There are some aspects of the August 11, 1989 Discussion Paper that several of our members would like to elaborate on or take issue with. These are as follows:

Page 2 "800 non-conventional systems", even 400 a year is hardly a "proliferation" considering that there are probably nearly 1,000,000 individual sewage systems in the state with over 10,000 new permits issued a year.

Page 3 Installation - the State Health Department "Waste Handling Regulations" are very specific as to the criteria for design and operation of non-conventional sewerage systems. These regulations require that an engineer prepare detailed plans (including a formal site plan) and that both the design and construction be approved by the Health Department. No new regulations are needed.

Page 3 Non-discharge systems involving drainfields or overland flow should be preferred precisely because disinfection (chlorinization) is not necessary when no discharge is made to surface streams. With land application, the impacts of a system failure are also more localized.

Page 4 Monitoring - Health Department personnel should conduct random sampling on a routine basis to protect against wide-spread failures. It is unlikely that the failures of s single individual waste system will have any significant impact on the environment.

Page 4 Sampling - the sampling program proposed by the Health Department is onerous. Random sampling by local sanitarians should suffice. Testing should focus on health as opposed to water quality issues, the Health Department routinely performs low-cost fecal coliform tests in-house.

Page 5 VPDES Concurrent handling of the Pollutant Discharge Elimination System permits (by the Health Department instead of the Water Board) and the approval of plans for nonconventional systems (by the Health Department) makes sense.

Page 5 VPDES - Some savings in administrative time would be possible if VPDES permits <u>for individual homeowner systems only,</u> were transferrable with the property.

Page 6 Sanitary Districts - Local governments can establish authorities and districts to maintain and monitor conventional as well as package individual sewage treatment options.

Page 6 Private Companies -Private companies could be certified (state or local) to operate maintenance-intensive individual or community waste systems. (Option 3). The Health Department should develop regulations regarding such companies, including provisions for licencing personnel, replacement part inventories and delivery times, frequency of service, and bonding.

Page 7 Health Department The Health Department's role as a regulatory body should not be compromised by adding operation responsibilities. Who would monitor the Health Department's operations? (Option 4).

Page 7 Prohibition So long as septic regulations are not made more stringent, prohibition of single family package systems for new subdivisions would be reasonable. Single family systems should be permitted to repair or replace failing conventional systems, or when a local government assumes responsibility for operation and maintenance.

Page 11 Funding Funds should only be made available to the poorest localities to solve existing problems. All other situations should be handled on a local, and not a state, basis.

It should be noted that interpretations and practices of Health Department sanitarians vary widely throughout the State. Local governments share authority to regulate small sewage systems, and this adds to the confusion. A uniform state policy and standards would be very helpful.

We appreciate your diligent pursuit of practical and equitable regulations and thank you for your consideration of our views. If we may be of any more assistance, please contact Brian Creamer in our Technical Services Department at our Fair Lakes address.

Respectfully,

Roger W. [illegible]
Chief Executive Officer
Northern Virginia Building
Industry Association

cc: Tony Ahuja
Eric Zicht

SOUTHEASTERN VIRGINIA PLANNING DISTRICT COMMISSION

GEORGE L. HANBURY, II, CHAIRMAN • REBA S. McCLANAN, VICE CHAIRMAN • JOHN J. JACKSON, TREASURER

THE REGIONAL BUILDING • 723 WOODLAKE DRIVE • CHESAPEAKE, VIRGINIA 23320 • (804)420-8300 • ARTHUR L. COLLINS, EXECUTIVE DIRECTOR / SECRETARY

October 13, 1989

Mr. Alex Thrower
Office of Policy Analysis
State Water Control Board
P. O. Box 11143
Richmond, Virginia 23219

Re: STP Policy (POS:GEN)

Dear Mr. Thrower:

Per your request of October 12, 1989, enclosed is one (1) copy of the "Policy Statement on Provision of Sewage Collection and Treatment Facilities," adopted by the Southeastern Virginia Planning District Commission in August 1987. As I indicated, this Policy has been used to some degree by several area local governments in responding to proposals for individual and community package sewage treatment plants.

We are most interested in your effort to develop a state regulatory policy for permitting package plants. This area's biggest concerns with such facilities have been:

- the water quality impacts associated with new discharges to small water bodies;
- the potential for the availability of such facilities to encourage and make possible premature or inappropriate development; and,
- long-term maintenance problems and the future financial impact on local governments when facilities must be purchased to rationalize the provision of public facilities or to correct operational inadequacies.

We would appreciate the opportunity to review your efforts and to participate in the development of the state's policy.

If you have any questions or need further information, please do not hesitate to call.

Sincerely,

John M. Carlock
Chief Physical Planner

JMC:dfs
Enclosure

POLICY STATEMENT ON PROVISION OF SEWAGE COLLECTION AND TREATMENT FACILITIES SOUTHEASTERN VIRGINIA PLANNING DISTRICT COMMISSION

Provision of wastewater treatment facilities in Southeastern Virginia is critical to the accommodation of development in a manner which protects public health and the environment. Rational and efficient provision of these facilities has been examined in many studies prepared by state, regional and local agencies. Most of the recent studies of this issue have also examined the water quality implications of such facilities. The recent escalation of urban development in the region and especially in the rural portions of Southeastern Virginia has resulted in proposals to provide such facilities through private sector initiatives. Because of uncertainties about the long-term effectiveness of such an approach, the Southeastern Virginia Planning District Commission has developed the following policy statement on the provision of wastewater collection and treatment facilities to serve development in Southeastern Virginia.

BACKGROUND

The Hampton Roads Water Quality Management Plan is the official water quality management plan for the Hampton Roads area. Prepared initially in 1978, the Plan was updated in 1983. It has been adopted, in part, by the State Water Control Board and accepted by the Hampton Roads Sanitation District Commission, the SVPDC, and the Peninsula Planning District Commission as the basis for future efforts to manage and improve water quality in the Hampton Roads area. Plan recommendations were based on extensive water quality, land use, socioeconomic, environmental and institutional analyses. Development of the Plan involved extensive public and government agency participation.

The Hampton Roads Water Quality Management Plan recommends against the approval of new point source discharges in most area streams, especially the smaller tributaries. This recommendation is based on the findings of the water quality analyses, which indicated severe adverse impacts on small streams due to the discharge of treated wastewater. The impacts are exacerbated by the low freshwater inflow and minimal tidal flushing in many of these streams. In fact, in a number of the small streams, treated wastewater discharges could constitute the bulk of stream flow. Tidal streams throughout the area contain shellfish beds. When new point source discharges are introduced into such streams, the Virginia Department of Health automatically closes shellfish beds to harvesting for direct marketing. In some cases, the shellfish beds being closed may be up to one mile away from the discharge point.

The Plan also recommends that future wastewater treatment services be provided through public facilities. Historical experience with the operation of private sewage treatment plants in this region has been less than optimal. Because of the location of the discharges of such facilities in area estuarine systems, adverse water quality impacts and standards violations have occurred. Long-term maintenance has been deficient and extensive corrective actions required. Considerable public expenditure has resulted when the facilities are purchased and closed. For example, the City of Virginia Beach is spending more than $9,000,000 to

purchase two such facilities which discharged to the Lynnhaven and Elizabeth Rivers.

Over the last decade, many area streams have experienced considerable water quality improvement as the result of public and private expenditures for both point and nonpoint source control programs. Removal of point source discharges to the Lynnhaven River as the result of action by the City of Virginia Beach, the HRSD and the Navy resulted in the opening of formerly closed shellfish grounds, at least on a temporal basis. Point source discharges were also removed from the Nansemond River through action by the City of Suffolk and the HRSD. Again, water quality improvements have resulted. Improvements in Nansemond River water quality are continuing through the expenditure of more than $2,000,000 in federal, state and private funds to control agricultural nonpoint source pollution. The Pagan River has experienced water quality improvements through upgrading of existing wastewater facilities by the Town of Smithfield and the various meatpackers. Additional improvements associated with the Chesapeake Bay Initiatives' Shoreline Sanitation effort may be expected.

The Hampton Roads Water Quality Management Plan also recommended that in the urban areas, on-lot disposal of waste through septic tanks should be phased out, except where provision of public sewerage facilities was infeasible. The Plan acknowledged that many soils in the region, especially in the rural area, were unsuitable for use of septic tanks for waste treatment and disposal.

POLICY STATEMENT

It is the policy of the Southeastern Virginia Planning District Commission that future wastewater collection and treatment facilities be provided in accordance with the following guidelines.

1. No new private point source discharges of wastewater should be permitted to waterways which:

   a. Contain productive or potentially productive shellfish grounds, whether presently condemned or not.

   b. Are used for primary contact recreation.

   c. Are existing or potential potable water supply sources.

2. New private point source discharges that would degrade the ambient water quality of the receiving waterbody will not be permitted.

3. Where new sewage treatment capacity is needed, centralized, regional facilities are preferred.

   a. If the area to be served lies within the boundaries of the HRSD, service should be provided by HRSD in accordance with its Development Plan and associated rules and regulations.

   b. In all other areas, the local jurisdiction should provide the service directly or in cooperation with adjacent local jurisdictions.

c. Whenever a new facility is provided within the planned service area for a centralized, regional facility, the new facility should be considered as an interim facility, pending the availability of service from the centralized facility.

4. All new facilities treating domestic wastewater should be owned and operated by the public sector - HRSD or the local jurisdiction.

   a. Collection facilities to serve new development should be built by the developer and deeded to the local government.

   b. Facilities to serve existing development should be built by the local government.

   c. Treatment and transmission facilities should be built as cooperative ventures by the public and private sectors in accordance with local requirements and the above-noted ownership policy.

   Note: Transmission facilities within the HRSD can and should be built through the HRSD Interest Participation Agreement Program.

5. Where provision of centralized wastewater treatment facilities is infeasible, on-lot septic systems would be used if soils and development density are suitable for such use. In all cases, the requirements of the Virginia Department of Health must be followed.

6. Private facilities having a discharge to surface waters and serving one dwelling unit are acceptable only if no other service options are available and only if the following conditions are met:

   a. Meet all NPDES permit discharge limits regardless of cost or hardship.

   b. Agree that when public sewerage facilities become available, the facility will be abandoned, at no cost to local government, even if the system is functioning properly and meeting permit limits and that connection will be made to the public sewerage system.

   c. That all other requirements of the affected city, county or town are complied with.

   d. Warrant through a performance bond that the system will be maintained.

September 1, 1989

COMMONWEALTH of VIRGINIA
State Water Control Board
Richmond, Va. 23230-1143

Mr. Rick Weeks
Policy and Budget Manager

After a comprehensive review of your paper concerning SJR 161, and as a VPDES permit holder, as well as a concerned citizen relative to ensuring that the Virginia aquifers, ground waters, rivers, streams and other bodies of water are not polluted, I offer the following observations and comments.

Your paper states that "111,828 on site waste water disposal methods are insufficient and present potential threats to the public health". I assume that you are speaking of conventional septic systems which were installed prior to the implementing of the current percolation test requirement where given todays standards, a septic permit would not be granted due to the condition of the surrounding soil. It seems to me that the 800 VPDES permits pose a small problem in relation to that larger number of conventional septic systems. I think the state should split the problem in two parts and determine a resolution for each of the problems. In as I don't have a conventional septic system, I won't comment except to say that if they are causing pollution of waters then they should have to install a system which doesn't pollute. In reading your paper, I saw no mention of a policy to go back and require all septic system owners to install a more efficient one which would not pollute. Perhaps this is what is intended, and then I can see where there would be an administrative nightmare in issuing new permits and monitoring them after they are in place. Unfortunately, I also see this as a bonanza for the contractors who install them and the " third party operation and maintenance contractor" who would life cycle them.

As for the 800 VPDES permit holders, I would welcome Technical Assistance in ensuring that the contractor I hire would install my filtration system correctly so that it works properly and is in accordance with code. I would like to point out, however, that when I asked a member of VDH where I could read the code, he could not offer any information on where or how to obtain that information. My comment here is who will ensure that the code is readily available and will everyone interpret it the same manner to get these systems installed correctly.

I think the inspection program should be initiated, but not as a routine scheduled event, perhaps as a " random drawing" based upon the number of employees available to do the inspections and within their workload assignments. A simple computer program could do the "drawing" based on the database list of permit holders. The inspection should be required only once every five years. If the inspection ends in a failure then the owner should have to contract with the third party for maintenance for the remainder of the life of the current permit (< 5 years). Each permit holder should be inspected during the five year life of the permit or at renewal to ensure compliance with all requirements. The aforestated

policy would only " punish " those who did not comply with the system operation and maintenance requirements.

I think that to be uniform the State will have to regulate this inspection very much the way the auto inspection program is done with the inspection and licensing of the contractors who install the systems and the " third party maintenance contractors ". If this doesn't happen I can see a lot of people being fleeced by these contractors such as that which use to occur in the early days of the auto inspection program.

I think that SWCB and VDH should develop the policy jointly and implement it through the local governments. A mediation board should be maintained at SWCB to solve grievances between the system owner and the local government.

I think local government should execute the policy only. If the program is to be uniform and fairly adjudicated then it must be set up this way and with the mediation board to ensure that there are not conflicting policies implemented and operated.

My final comment is, " Why wasn't the systems installed correctly? Does the state improperly train the inspectors?". Do these systems not require a final inspection by a state or local government official such as the conventional one do? " Why didn't the owner maintain the system?". Was he given a maintenance manual by the contractor? Was the contractor required to give a manual to the owner as well as some on the job instruction when the system was complete? The inspection program should include a requirement for the contractor to provide manuals and instruct the owner and the owner should have to demonstrate this knowledge and skill when the final inspection is done on the system by the state. This program is no different than the auto inspection program where some people will conscientiously maintain their system and some won't and they will fail the inspection. Punish those who do not comply, not everyone, which is what options two through six, as currently drafted, will do.

I request these points be read at the SJR 161 meetings.

Thank You
Carl Haines

Land Services Group Limited
166 Ft. Evans Road, N.E., Leesburg, VA 22075

September 19, 1989

Virginia State Water Control Board
Office of Policy Analysis
Attn: Lori A. Freeman
P.O. Box 11143
Richmond, Virginia 23230

RE: Senate Joint Resolution 161 of 1989
Package Sewage Treatment Systems

Dear Brian:

From past experience as an engineer both in a local public utility and as a consultant to municipalities, I share many of the concerns that the Health Department and State Water Control Board have raised concerning small sewage package treatment plants. These small facilities are not generally economical to construct or operate. The Health Department and Water Control Board are especially concerned when there is no experienced, responsible party designated to operate the facilities. This problem is particularly pronounced when the operating responsibility lies with an individual home-owner or a residents association.

SEWAGE SYSTEMS

Central sewerage systems are, of course, preferred; however, in many areas such systems are not available or practical. When soils are suitable, conventional septic tanks and drainfields have proven highly reliable and cost-effective. When soils are marginal or unsuitable, alternative system may be considered. In general, these facilities should be kept as simple and maintenance-free as possible. Treatment levels on low-tech conventional septic systems are usually as good as the higher priced and less reliable systems. Low pressure, mound and STEP (Septic tank effluent pumping) systems are usually manageable even by individual homeowners. The more exotic systems should be reserved for use as a last resort, possibly limited to the replacement and repair of malfunctioning systems.

It should be noted that in recent years, state and local authorities have been adopting increasingly stringent regulations pertaining to conventional septic tanks and drainfields. While these regulations add a measure of safety and reduce the number of septic field failures, they also restrict traditional uses of rural properties with marginal soils. The recent trend toward unconventional sewerage systems is probably largely a response to tne new regulations on standard septic systems. More consideration must be given to this balance when adopting new regulations. Personally, I prefer conventional, low-maintenance systems even in situations where performance will be marginal.

OPERATION & MANAGEMENT

Operation, management and government oversight are particular problems for small sewerage systems. Public ownership is preferred, whether by municipality, sanitation district or authority. Some private companies are capable of managing large and small systems. Many of these companies own the systems, but some also contract their expert services to government entities or home-owner associations. Again, government involvement would be preferred. The private companies are regulated by SCC, the Health Department, and in some cases, through local regulations. The Health Department requires that the operations of community systems be licenced. Perhaps this requirement should be extended to small and individual package treatment systems.

Operation of complex sewage systems by home-owners associations and individuals is not generally desireable. These entities do not have the training, experience or resources to assure maintenance and safe operation. In addition, it is unreasonable to ask state and local officials to try to oversee such operations.

DRAFT DISCUSSION PAPER

There are some aspects of the August 11, 1989 Discussion Paper that I would like to elaborate on or take issue with:

Page 2
Page 5 — 800 non-conventional systems, even 400 a year, is hardly a "proliferation" considering that there are probably nearly 1,000,000 individual sewage systems in the state with over 10,000 new permits issues a year.

Page 3 — Installation - the State Health Department "Waste Handling Regulations" are very specific as to the criteria for design and operation of non-conventional sewerage systems. These regulations require that an engineer prepare detailed plans (including a formal site plan) and that both the design and construction be approved by the Health Department. No new regulations are needed.

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Page 3 Non-discharge systems involving drainfields or overland flow should be preferred precisely because disinfection (chlorinization) is not necessary when no discharge is made to surface streams. With land application, the impacts of a system failure are also more localized.

Page 4 Monitoring - Health Department personnel should conduct random sampling on a routine basis to protect against wide-spread failures. It is unlikely that the failure of a single individual waste system will have any significant impact on the environment.

Page 4 Sampling - the sampling program proposed by the Health Department is onerous. Random sampling by local sanitarians should suffice. Testing should focus on health as opposed to water quality issues, the Health Department performs low-cost fecal coliform tests routinely in-house.

Page 5 VPDES Concurrent handling of the Pollutant Discharge Elimination System permits (by the Health Department instead of the Water Board) and the approval of plans for nonconventional systems (by the Health Department) makes sense.

Page 5 VPDES - Some savings in administrative time would be possible if VPDES permits <u>for individual homeowner systems only,</u> were transferrable with the property.

Page 6 Sanitary Districts - Local governments can establish authorities and districts to maintain and monitor conventional as well as package individual sewage treatment options.

Page 6 Private Companies - Private companies could be certified (state or local) to operate maintenance-intensive individual or community waste systems. (Option 3). The Health Department should develop regulations regarding such companies, including provisions for licencing personnel, replacement part inventories and delivery times, frequency of service, and bonding.

Page 7 Health Department - The Health Department's role as a regulatory body should not be compromised by adding operational responsibilities. Who would monitor the Health Department's operations? (Option 4).

Page 7 Prohibition - So long as septic regulations are not made more stringent, prohibition of single family package systems for new subdivisions would be reasonable. Single family systems should be permitted to repair or replace failing conventional systems, or when a local government assumes responsibility for operation and maintenance.

Page 11 Funding - Funds should only be made available to the poorest localities to solve existing problems. All other situations should be handled on a local, and not a state, basis.

It should be noted that interpretations and practices of Health Department sanitarians vary widely throughout the State. Local governments share authority to regulate small sewage systems, and this adds to the confusion. A uniform state policy and standards would be very helpful.

Yours Truly,

Eric E. Zicht, PE LS

c.c. Rob Montgommery

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750 ALPHA DRIVE, CLEVELAND, OHIO 44143 U.S.A. • 216/461-2000 • FAX 216/442-9008 • TLX 251616 JET UR

October 17, 1989

Virginia State Water Control Board
Office of Policy Analysis
P.O. Box 11143
Richmond, Virginia 23230

Dear Sir:

Jet Inc. manufactures among other products Home and Commercial Wastewater Treatment Systems. We have read your paper titled State Water Control Board Draft Discussion Paper In Response to Senate Joint Resolution 161 of 1989 August 11, 1989. Of the four options you have offered for single family home package sewage treatment systems Jet recommends option number Four on page Seven as being the most viable and beneficial to the citizens of the Commonwealth.

Thank you for allowing Jet to comment on your paper.

Sincerely,

William F. Neal

William F. Neal R.S.
Vice President of Sales

WFN/sah

cc: Gary Getz

DEBBI M. HINTON
RT. 1, BOX 298
DAYTON, VA. 22821

TO: SWCB, Participants at the September 28, 1989 meeting at Woodstock to address SJR 161.

Please respond in writing to the following questions and remarks presented at the SWCB meeting in Woodstock on September 28, 1989. I had promised to get this to you immediately following the meeting, but my father died and I ignored my business responsibilities for a couple of weeks. I trust that the meeting that night was educational to those who are searching out some regulations and guidelines for this important topic.

1. Who were the local government representatives on the SWCB study committee? Were they well-informed about mechanical waste water treatment systems? Had they even been on-site with a small private residential treatment plant?

2. If the responsibility of sand filters and mechanical extended aerobic systems is truly being considered for local governments, why haven't all of the localities been notified of this possibility? The 2 counties with which I have been involved (Rockingham and Augusta) were not familiar with the systems and had never seen one in operation until we invited them to one of our sites. They are unfamiliar with the permitting process, the installation procedures, and of the efficiency of the systems. Who will assume the responsibility of educating these people? There are several government agencies already involved in the permitting process and the communication is poor between these agencies. If we create another government agency to monitor and maintain these systems, will that create even more communication and responsibility hazards?

3. If more laws are adopted in reference to controls of these alternative systems, do the creating agencies fully intend to enforce the laws? Or, will they be just another guideline to penalize the honest man?

4. The study referred to in the SWCB position paper was begun after the moratorium was in place. Is there a moratorium on the mechanical systems at present? What policy controls the permitting process? Who initiated the moratorium? How long can it legally be in effect? Is the moratorium state-wide? If not, why not? If not, where are mechanical systems still being permitted? What requirements are being considered by the SWCB to satisfy the SWCB that the moratorium is not required? Does the SWCB monitor the installation of these systems sufficiently to guarantee that only state-approved systems are being installed, and that they are being installed and maintained properly? Please state the SWCB position on sand filters with pumps? Who enforces the monitoring requirements for the mechanical systems and the sand filters with pumps?

5. The sand filter systems and the mechanical systems require the same permit. As is in evidence in our locality, either type of system can fail. The sand filters should be under the same policy requirements as the mechanical systems. In our area, the sand filters are being installed in a haphazard manner by contractors who have no concept of purpose and no sense of environmental responsibility.

6. The SWCB position paper state that there are 111,828 septic systems failing in Virginia. What percentage of standard septic systems does this figure represent? If septic tank/drainfield failure is a prevalent problem in Virginia, what is your alternative? The position paper addresses the need for centralized sewage treatment. Please give a cost projection for centralized collection and treatment vs. the cost of the state maintaining and monitoring these mechanical systems.

7. What does the SWCB see as their role in the permit process, the installation and monitoring of, and the enforcement of policy, of these installations which require NPDES permits? Does the SWCB ever go on-site with any of the applications submitted. Please present data from your inspections of systems already in-ground. I am curious to know if our problems are peculiar to one type of system or if they are general occurences.

8. I submit that a unique application be programmed for any discharge less than 1,000 gpd. I am interested in working on a committee on that project. Other states issue these permits and Virginia could consult with Ohio, Pennsylvania, Florida etc. for suggestions and recommendations as to how permits are processed and what general regulations control these discharges. If Federal involvement is required to intervene with the EPA for permission to initiate a separate and uniques small discharge permit, we have the channels to accomplish this. Along with this new application, a permittee sign-off should be included to inform the applicant of his environmental and health responsibilities. At the present, the permits are mailed to the homeowner. I would venture a guess that more than 99% of the homeowners never read the permit. The SWCB could hold the permit until this sign-off has been completed and returned to the issuing SWCH official.

9. Does the SWCB foresee the possibility of re-opening Virginia in the near future?

I am willing to assist in any way to resolve this situation. Our business has been eliminated by this moratorium. I believe that this in unfair and unless the VDH and the SWCB can produce some data which heretofore has not been presented, this moratoium is illegal.

Sincerely,

Debbi M. Hinton

Debbi M. Hinton

The Stone Co.
P.O. Box 19097
Roanoke, VA 24019

703-563-8757

September 26, 1988

Commonwealth of Virginia
Department of Health
Office of Health Commissioner
Madison Building
Richmond, Va. 23219

ATTN: C. M. G. Buttery, M.D.

Dear Dr. Buttery:

During our meeting of August 23rd, we discussed attempting to establish a pilot program on a county level using NSF third party certification, and mandatory service contracts for the life of each aerobic system sold. On September 22nd, we met with the board of supervisors of Shenandoah County and presented the program to them. Although they did not approve the program there was interest ough that they will study the proposal and should come to a conclusion by their xt meeting.

We also presented to them a draft policy and procedure for inplementation of individual home wastewater treatment systems. This policy is a composite of four state policies, Florida, Virginia, Ohio, and Illinois. As you will note on page 5 Section 100.4 we have covered long term maintenance.

We are pleased with the reception we received in Shenandoah county and will keep your department informed as the program progresses.

A Copy of the NSF third party certification, and the draft policy and procedure for implementation of individual home wastewater treatment systems has been forwarded to Dr. Tenny since Shenandoah County is within his region.

If you need any additional information please let me know.

Best Regards,

Todd Stone

Todd Stone
The Stone Co.

CC: Mr. Grover M. Holler, Jr.
✓ Mr. Larry G. Lawson-Office of Water Resources Management, SWCB
Mr. Dennis M. Morris-Chairman, Shenandoah County Supervisor's
Dr. Malcom Tenny- Regional Medical Director
Robert W. Hicks, Director, Division of Sanitarian Services
Mike Price - Norweco Inc.