ANNUAL REPORT OF THE

Virginia Water Commission

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

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1991
REPORT OF THE
STATE WATER COMMISSION

TO: The Honorable L. Douglas Wilder, Governor,
and
The General Assembly of Virginia

The State Water Commission is a legislatively mandated, fifteen-member panel whose function is to perform the following:

1. Study all aspects of water supply and allocation problems in the Commonwealth, whether these problems be of a quantitative or qualitative nature;

2. Coordinate the legislative recommendations of all other state entities having responsibilities with respect to water supply and allocation issues; and

3. Report annually its findings and recommendations to the Governor and the General Assembly. (Va. Code § 9-145.8)

During 1990 the Commission examined three issues: (i) financial responsibility for aboveground storage tanks and pipelines, (ii) how to finance the Commonwealth's drinking water needs, and (iii) strategies for resolving water supply conflicts.

I. STUDY OF FINANCIAL RESPONSIBILITY FOR ABOVEGROUND STORAGE TANKS AND PIPELINES (SJR 114)

A. Background/Authorization for Study

Events of the past several years have focused the nation's attention on the serious risk to the environment posed by oil spills and discharges from a variety of sources. Alaska recently suffered significant environmental and economic loss when the Exxon oil tanker, the Valdez, ran aground, spilling nearly 11 million gallons of crude oil in Prince William Sound. In January 1988, approximately one million gallons of diesel fuel spilled into the Monongahela River in Floreffe, Pennsylvania, when an oil storage tank, owned by the Ashland Oil Company , Inc., split apart and collapsed. The resulting oil slick moved miles downstream into the Ohio River, contaminating nearby water resources in Pennsylvania, West Virginia and Ohio, closing the Monongahela River to commerce, and damaging private property and businesses in the area. Three months later 400,000 gallons of crude oil leaked into a waterway near the San Francisco Bay from a Shell Oil aboveground storage tank. The Environmental Protection Agency (EPA) reports that, of the 2,000 to 3,000 spills from oil storage facilities which occur annually, about 20 to 30 spills of more than 150,000 gallons enter inland and coastal waterways.[1]

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1. "Inland Oil Spills," United States General Accounting Office, February 1989, p. 10.

Virginia has not been immune to such spill incidents. From July 1989 to July 1990, there were 63 reported incidents involving aboveground storage tanks. Of these 10 discharges reached state waters. On December 10, 1989, a rupture of Colonial Oil Company's pipeline in Orange County resulted in a discharge of approximately 5,000 barrels of kerosene into Mine Run. Although the kerosene was originally contained by earthen dams, heavy rains and snow melt raised the water level in Mine Run, breaching the dams and pouring approximately 400 barrels of kerosene into the Rappahannock River, the sole source of drinking water for the City of Fredericksburg. Because of the concern over kerosene contamination, the City was unable to make full use of the river for nine days. The kerosene spill violated the State Water Control Law (Va. Code § 62.1-44.2 et seq.), permit regulations and the state's general water quality standard. In light of these violations and a potential $100,000 penalty, Colonial agreed to pay a $50,000 penalty and perform a study to determine the effects of the spill.[2] The SWCB expended $17,500 for oversight and cleanup, a sum which has been reimbursed by the company.

More recently, a tanker spill occurred in the Elizabeth River. On July 1, 1990, two ships, the Columbus America and the Neptune Jade, collided in Hampton Roads, spilling approximately 30,000 gallons of fuel oil into the mouth of the Chesapeake Bay. The SWCB is currently seeking reimbursement for $5,400 expended for investigation and oversight associated with the spill.

Realizing that Virginia's laws were inadequate to protect the Commonwealth's waters from pollution resulting from such incidents, the 1990 Session of the General Assembly enacted comprehensive oil spill legislation (SB 411). The new law (i) increased the penalties for discharging oil into state waters, (ii) required the operators of certain oil storage facilities, vehicles and vessels to develop oil discharge contingency plans, and (iii) sought to ensure that, in the event of a spill, the owner/operator of a tanker vessel had the financial resources to pay for investigation, containment and cleanup and for damages caused by the oil spill (financial responsibility). In 1987, with enactment of the underground storage tank statutes (Va. Code § 62.1-44.34:8 et seq.), a similar demonstration of financial capability had been required of owners, operators and vendors of underground storage tanks.

However, there remains one type of operation for which the demonstration of financial responsibility is not required--an oil handling facility (i.e., aboveground storage tanks and pipelines). Consequently, the legislature passed Senate Joint Resolution 114 requesting the State Water Commission to determine the nature and extent of financial responsibility which should be required of owners/operators of aboveground storage tanks and pipelines in the Commonwealth. The Commission is charged with the responsibility of determining (i) the damage that could be caused by a spill from an aboveground storage tank and pipeline, (ii) the amounts of financial responsibility that should be required to address containment and cleanup in the event of a spill, and (iii) the availability and affordability of insurance coverage for spills.

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2. Minutes, March 19-20, 1990, Proceedings of the State Water Control Board.

1. *Current Regulation of Aboveground Storage Tanks (Oil Storage Facilities)*

a. Federal

The EPA has estimated that there are more than 650,000 onshore oil storage facilities nationwide containing aboveground oil storage tanks. While the total number of tanks in use is unknown, some of these facilities contain more than 1,000 tanks. Tank farms represent the largest category of aboveground facilities (37.7%), followed by stripper wells (26.2%), commercial establishments (14%), and industrial manufacturing facilities (13.7%).[3]

The Clean Water Act established the EPA's authority to regulate aboveground oil storage facilities for the purpose of preventing oil spills in navigable waters, and removing or arranging for the removal of oil from such waters. The regulations apply to (i) facilities having a total aboveground storage capacity of more than 1,320 gallons, (ii) facilities having any aboveground oil tank container with a capacity in excess of 660 gallons, and (iii) facilities having a below-ground storage capacity of more than 42,000 gallons. Owners or operators of such facilities are required to prepare a written Spill Prevention Control And Countermeasure Plan (SPCC Plan) which describes the recent spill history of the facility, the kinds of equipment failure that could occur, the predicted movement and amount of major spillage, appropriate containment and diversionary structures or equipment (e.g. dikes, drainage systems, retention ponds) available to prevent oil from reaching waterways, and steps to be taken in the event of an oil spill or discharge. The SPCC Plan must be reviewed and certified by a registered professional engineer, and a copy is to be kept at the facility. The plan is not sent to the EPA unless the facility experiences either (i) an oil spill of more than 1,000 gallons into natural waterways or adjoining shorelines or (ii) two oil discharges of any size within any consecutive twelve-month period.

The EPA's regional offices are responsible for administering an inspection program aimed at ensuring that facilities are in compliance with the regulations. Most of the inspections are conducted by private firms under contract to the agency. The law authorizes fines of up to $5,000 per violation of the oil pollution prevention regulations.

In addition to the EPA, the Occupational Safety and Health Administration (OSHA) has authority to regulate aboveground oil storage tanks. OSHA has adopted industry standards for design, construction and testing of tanks but rarely inspects oil storage tanks because, according to the agency, they present a minimum threat to employee safety.[4]

b. State

At the state level, guidance is provided on acceptable construction standards, placement and location for oil and hazardous materials storage and transfer, by the Virginia Board of Housing and Community Development through the Uniform Statewide Building Code (USBC). This set of mandatory statewide standards must be complied

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3. "Inland Oil Spills," United States General Accounting Office, February 1989, p. 10.

4. Ibid. p. 9.

with in all buildings and structures. The Board bases the technical requirements of the USBC on nationally accepted model codes and standards such as the BOCA National Building Code and the National Fire Protection Association Standards. The standards developed by the Board are enforced by local officials. A specific provision of the USBC requires that a permit be obtained to install, place, remove, abandon, place temporarily out of service, or dispose of any flammable or combustible liquid tank.

Those buildings and structures subject to the USBC must also meet the standards of the Virginia Statewide Fire Prevention Code. The purpose of these standards is "to safeguard life and property from the hazards of fire or explosion arising from the improper maintenance of life safety and fire prevention and protection materials, devices, systems and structures, and the unsafe storage, handling and use of substances, materials and devices, wherever located." Any local government may enforce this code by assigning it to a local agency or agencies of its choice. If the local government chooses not to assume this responsibility, the State Fire Marshal then has the authority to enforce the fire code regulations.

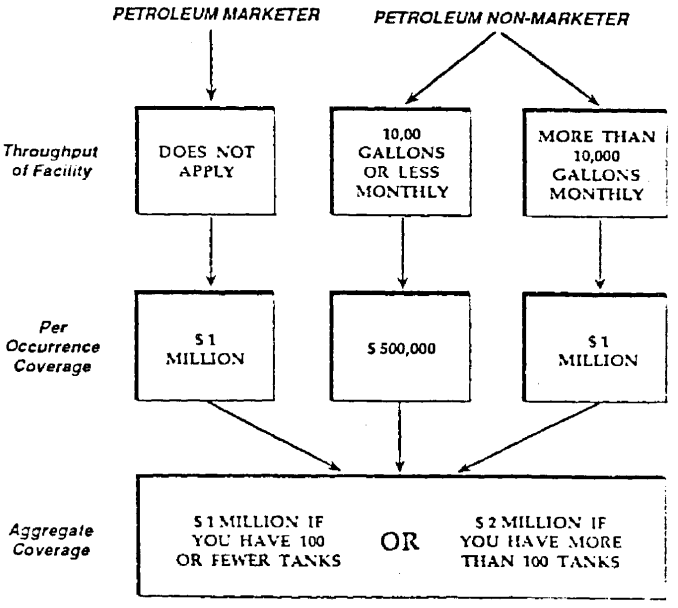
Lastly, the Department of Mines, Minerals and Energy's regulations require that every permanent oil tank or battery of oil tanks associated with oil drilling operations be surrounded by a dike or fire wall with a capacity of 1 1/2 times that of the tank or battery of tanks. Because of the extensive revisions of the Gas and Oil Act (Va. Code §45.1-361.1 et seq.) by the 1990 Session of the General Assembly, the Department is revising the Act's regulations. One of the issues under consideration is the adoption of certain national standards for Virginia's aboveground oil storage tanks located at well sites. Section 45.1-361.3, the Act's bonding and financial security provisions, does require that all applicants for a drilling permit provide bond with surety acceptable to the Director. The amount of the bond is to be sufficient to cover the costs of properly plugging the well and restoring the site, but in no instance shall the amount be less than $10,000 per well plus $2,000 per acre. The bond ostensibly covers any leaking tank situation where the permit holder has not undertaken corrective action.

2. Current Financial Responsibility Requirements For Oil Spills

a. Underground Storage Tanks

In 1986, the Resource Conservation and Recovery Act (RCRA) was amended to require that the EPA establish standards of financial responsibility for taking corrective action and providing compensation to third parties for injury and property damage resulting from releases from underground storage tanks (USTs). The amount of financial responsibility required of owners and operators and the dates for demonstrating compliance depends on (i) the type of business operated, (ii) the amount of throughput of the tank, and (iii) the number of tanks owned. Owners of tanks at petroleum marketing facilities (i.e., tanks used in petroleum production, refining or marketing) and nonmarketers having average monthly throughput figures of more than 10,000 gallons must demonstrate financial ability to pay at least one million dollars per occurrence. Nonmarketers having 10,000 gallons or less of monthly throughput must demonstrate coverage of $500,000 per occurrence. The aggregate coverage, that is the total amount of financial responsibility that an owner must have to cover all leaks which might occur in one year, is one million dollars for 100 or fewer tanks or two million dollars for more than 100 tanks.

UST Financial Responsibility Requirements



Aware that the financial assurance levels required by the federal government might place a significant burden on many of the smaller petroleum-related businesses, the Virginia General Assembly adopted a policy by which the state would assume a portion of the federally mandated financial responsibility requirements. The resulting financial responsibility statute directed the State Water Control Board to develop regulations which require owners and operators to demonstrate financial responsibility of $50,000 for corrective action and $150,000 for compensating third parties for bodily injury and property damage, with a $200,000 annual aggregate (Va. Code § 62.1-44.34:12). Financial responsibility can be established by one or any combinations of the following: insurance, guarantee, surety, bond, letter of credit or qualification as a self-insurer. The Virginia Underground Petroleum Storage Tank Fund (Va. Code § 62.1-44:34:11) is used for demonstrating financial responsibility in excess of the $50,000/$150,000 per occurrence costs, up to the one million dollars federal requirement. The Fund is capitalized by a one-fifth of one cent per gallon tax on motor fuels, with the tax being levied until the Fund exceeds 20 million dollars. The tax would be reinstituted when the Fund has fallen or is likely to fall below 10 million dollars. The Fund, which as of December 31, 1990, maintained a balance of $8.5 million, is available to the owners and operators of the 22,000 facilities (60,000 USTs) which have registered their tanks with the SWCB.

Disbursements from the Fund can be made not only for per occurrence costs in excess of the owners' financial responsibility, but also for (i) costs incurred for taking immediate corrective action to contain or mitigate the effects of a petroleum release, (ii) costs of corrective action up to one million dollars when the owner cannot be determined within 90 days or the owner is incapable of properly carrying out a cleanup, and (iii) SWCB administrative costs.

The SWCB, under specific circumstances, can seek recovery of monies expended for corrective action, and has the right of subrogation for monies expended from the fund as compensation for personal injury, death or property damage. According to SWCB regulations, no person will be reimbursed from the Fund when (i) there has been a violation of a substantive environmental regulation, (ii) there is willful misconduct or negligence, or (iii) the claim has been reimbursed by an insurance policy or other financial mechanism. If the costs of cleanup or compensation for damages or injury exceed one million dollars, the SWCB has the authority to expend federal monies. The federal government has dedicated one-tenth of one cent from the federal gas tax to finance a $500 million fund which is available to the states. Virginia has received approximately three million dollars from this fund.

b. Tank Vessels

Oil spill legislation enacted in 1990 strengthened the existing law governing the discharge of oil into state waters from vessels, vehicles, and oil handling facilities. The new law requires an owner/operator of a tank vessel with a maximum capacity of 15,000 gallons or more, which enters state waters, to demonstrate financial responsibility by depositing with the SWCB "cash or its equivalent in the amount of $500 per gross ton of such vessel" (Va. Code § 62.1-44.34:16). The SWCB is required to promulgate specific financial responsibility regulations by January 1, 1992, and owners of tank vessels must comply with the various requirements within 90 days of the effective date of the regulation.

3. Financial Responsibility Requirements in Selected States

The Commission conducted a survey of other states to determine the nature and extent of financial responsibility required of owners/operators of aboveground storage tanks. All the states surveyed regulate, in some manner, the use or operation of such tanks. In most instances, these regulations are in the form of technical standards for the construction and placement of storage tanks under a state's Uniform Building Code or state fire code.

While the vast majority of states contacted do not require a demonstration of financial responsibility, a number of states have created a fund to respond to oil spills. Six states (California, Maryland, New Jersey, New York, South Dakota and Texas) administer a spill response fund which can be used for cleanup of releases from both underground and aboveground storage tanks. Seven states (Delaware, Kentucky, North Carolina, Oklahoma, Oregon, Washington, and West Virginia) have an underground tank program in which monies are specifically targeted for cleanup of releases from underground petroleum tanks.

Only three states surveyed (Florida, Alaska, Pennsylvania) have adopted or are in the process of adopting regulations requiring the demonstration of financial responsibility. Florida currently regulates aboveground tanks under Chapter 17-61 of the Rules of the Department of Environmental Regulation. Until 1990, the rules in Chapter 17-61 regulated both aboveground and underground tanks with an individual storage capacity greater than 550 gallons. However, the Florida Environmental Regulatory Commission approved Rule 17-761 in June 1990, which creates a separate regulatory program for underground tanks. The new rule also includes a financial responsibility requirement for underground tanks. The Department has proposed Rule 17-762, which would create a similar program for aboveground storage tanks. Rule 17-762's financial responsibility requirement for aboveground tanks is the same as that for the underground program. The owner or operator of a tank system must demonstrate, by January 1, 1995, the ability to pay for facility cleanup and third party liability resulting from a discharge.

One way to meet the financial responsibility requirement is by participation in the Florida Petroleum Liability Insurance and Restoration Program. In order to participate in this program, a tank owner must demonstrate third party liability insurance coverage of one million dollars. Once this coverage has been documented, the owner becomes eligible for restoration funds. Under the restoration program, the state will pay up to one million dollars in site cleanup costs ($500 deductible). As long as the owner or operator is a program participant in good standing (i.e., he complies with Department regulations and is not in default on his insurance), no attempts are made by the state to recover the money spent on cleanup. Owners or operators are liable for third party claims and cannot seek recovery from the fund for such claims.

The program's expenditures for site cleanup are financed through the Florida Inland Protection Fund, which currently contains about $70 million. Revenue is generated for the Fund from two sources: registration fees and fuel taxes. A $25 registration fee for each stationary storage tank (aboveground and underground storage tanks with a storage capacity greater than 550 gallons), plus a $50 initial registration fee, generates about $1.25 million annually. This is supplemented by a tax on any fuel coming into or produced in the state. When the Fund is between $35 million and $50 million, the tax is 10 cents per barrel. If the Fund drops below $35 million but remains above five million dollars, the tax is 20 cents. When the Fund drops below five million dollars, the tax increases to 30 cents per barrel.

Alaska requires the owner or operator of oil terminal facilities with an effective storage capacity of 10,000 barrels or more to furnish "proof of financial ability to respond in damages . . . in an amount (1) not less than ten dollars, per incident, for each barrel of storage capacity at the oil terminal facility; or (2) $1,000,000, whichever is greater" (Alaska Stat. § 46.04.040). In June 1990, the Governor of Alaska signed House Bill 567, which changed the financial responsibility requirements effective June 1, 1991. The new regulations will require owners or operators of oil terminal facilities to show proof of financial responsibility of $50 million for crude oil terminals. For noncrude oil terminals, the requirement is $25 dollars, per incident, for each barrel of total noncrude oil storage capacity, or one million dollars, whichever is greater. If a

terminal facility stores both crude and noncrude oil, the primary type of oil storage determines the amount of financial responsibility. If noncrude oil storage predominates, the $25 per barrel requirement extends to the barrels of crude oil in the facility. The bill also expanded the methods of showing financial responsibility to include letters of credit or other proof of financial responsibility approved by the Department.

In 1980 the Alaska legislature created the Oil and Hazardous Substances Release and Response Fund (called the "470 Fund") with a one million dollar appropriation. This fund is used, among other things, for immediate site cleanup, and can be used for any spill, whether from underground or aboveground tanks; it is employed only when the spiller either refuses to pay or cannot be determined. Because of the Exxon spill, the state legislature in 1990 appropriated $50 million to the Fund. A second source of revenue used to capitalize the Fund is a five cents assessment on each barrel of oil produced in the state. The Fund's current balance is approximately $52 million.

The 1989 Pennsylvania General Assembly enacted the Storage Tank and Spill Prevention Act, which created a comprehensive regulatory program for storage tanks and facilities within the state. The Act gives the Department of Environmental Resources authority to require financial responsibility of aboveground storage tank owners and operators. Pennsylvania's aboveground program regulates those tanks with a capacity between 250 and 21,000 gallons. Tanks larger than 21,000 gallons are considered part of the bulk storage program and are regulated separately. Although it will take about two years to promulgate the regulations, Department officials predict financial responsibility requirements will depend on the proximity of the storage tanks to water sources. The statute sets out the following methods, or combination of methods, for showing financial responsibility for both the aboveground and underground programs: insurance, guarantee, surety, bond, letter of credit, qualification as a self-insurer, indemnity contract, risk retention coverage or any other method deemed satisfactory by the Department.

The regulations for the underground storage tank program are now being developed. Pennsylvania will meet the one million dollar federal requirement for financial responsibility for underground tank owners or operators through the use of the Underground Storage Tank Indemnification Fund, which will be made up solely of fees on underground tanks. Although they do not have the regulations completed, state officials believe the program will be financed by a $1,000 to $1,200 per tank annual fee. This money will serve to demonstrate financial responsibility. In the event of a release, the Fund will pay up to one million dollars, with no attempts at recovery from the spiller; however, the proposed regulations also include a $75,000 deductible for site cleanup and a $150,000 deductible for third-party liability. Department officials are unsure whether the regulations for aboveground tanks will parallel the regulations now under consideration for underground tanks.

A fourth state, South Dakota, includes a provision in its financial responsibility statute which mandates that the state "endeavor" to integrate private insurers as the primary or secondary risk-taker and to identify potential private companies to provide insurance coverage for pollution cleanup. According to administrators of the program,

the intent is not to give state officials authority to impose financial responsibility, but instead to encourage private companies to provide the same coverage as the state's fund so that the fund can be dissolved in the future.

4. Pollution Liability Insurance

For many of the smaller businesses, pollution liability insurance is the only option available to demonstrate the financial responsibility required by the EPA. While coverage is available, discussions with the insurance industry and the Petroleum Jobbers Association confirmed the difficulty of obtaining such coverage. Generally, coverage is more available to petroleum marketers than to nonmarketers. For tank owners who can find coverage, the cost is frequently prohibitive. Premiums average from $3,500 to $22,000, depending on the type of coverage, size of the deductible, and the condition and location of the tanks.

Even before writing a policy, most insurance companies will require both a tank tightness test, and soil test at the tank site. These tests are expensive. Tank tightness tests can cost between $250-$600 per tank, with an average site containing three to five tanks. Soil tests range between $3,000-$8,000 per site. When one adds the costs of possibly having to upgrade or replace a tank to the costs of insurance, many owners are reluctant to even apply for coverage. As the environmental coordinator for one of the major underwriters characterized the situation, "In reality, coverage is only available for a limited number of tank owners and for those people affordability can be a major problem."

The General Assembly established the Virginia Underground Petroleum Storage Tank Fund, with the expectation that the availability of the state fund would induce the insurance industry to offer wrap-around coverage at significantly lower premium costs. However, three of the four major companies holding or writing this type of insurance in Virginia--Agricultural Excess And Surplus Insurance Company (AEISC), Front Royal Group, Inc., and Federated Mutual Insurance Company--have been reluctant to offer coverage for the initial $50,000/$150,000 per occurrence costs, not covered by the state fund, (i.e., wrap-around coverage). Rather, they continue to offer primarily the one million dollars per occurrence and two million aggregate required by EPA. The fourth company, The Planning Group, has begun writing wrap-around coverage and the company is in the process of approving its first two applications for this type of coverage.

Henderson and Phillips, the exclusive agent for AESIC in Virginia, had initially written coverage for only underground tanks but is now also offering coverage for both USTs and aboveground tanks. The company's minimum premium is $3,500 but the rate will vary based on such factors as the age and construction of the tank, leak detection capability, and site location. The company is currently underwriting 18 policies in Virginia, most of which cover grocery stores and gas stations.

The Front Royal Group is writing policies for the release of petroleum products from both aboveground tanks and USTs. The company, licensed in Virginia in September 1989, is currently holding 10 to 15 policies; of this number, only one or two are for aboveground storage tanks. The premiums range from $2,800-$5,400 per location. There is a surcharge for coverage of aboveground tanks which ranges from

$200-$6,000 per location for smaller aboveground tank facilities (up to 200,000 gallons) to $7500-$10,000 per location for larger bulk terminals (over 250,000 gallons). Coverage is offered for both the tank facilities and larger bulk terminals but not for major facilities such as refineries.

Federated Mutual will not bind coverage on a location site where the tanks have not been upgraded to new tank standards, as outlined in the UST technical regulations. When the company first began writing pollution liability policies, it offered coverage to all of its existing general liability policy holders who owned USTs. At that time, there were no testing requirements to obtain coverage. Federated Mutual's primary markets for coverage are marketers, auto dealers, equipment dealers and specialty contractors (plumbers, electricians, heating and air conditioning, etc.). The company does not provide coverage for trucking companies, bus companies, car rental firms, governmental units, all of which own USTs and must comply with federal regulations. Currently, policy premiums range $3,600-$21,600 per year depending on the location of the tanks. As of August 3, 1990, Federated Mutual was writing 187 pollution liability policies in Virginia, 107 of which are written for petroleum marketers. Forty-six policies written for petroleum marketers cover aboveground storage tanks.

The Planning Corporation offers environmental impairment liability insurance for petroleum marketers through an exclusive arrangement with underwriters at Lloyd's of London. The Planning Corporation as administrator and manager of the failed Petroleum Marketers Mutual Insurance Company (Petromark) offers coverage similar to that which Petromark had offered to oil distributors in Virginia. The limits of insurance currently available are one million/two million dollars. Costs of coverage will vary depending on the deductible selected. Deductibles of $50,000 to $250,000 are available, according to company officials. Coverage can be designed to wrap-around the state underground storage fund. The company will not provide coverage for certain types of facilities such as municipalities, schools, airport fix-based operators and refineries.

B. Commission Deliberations

In its effort to formulate a financial responsibility policy for aboveground storage tanks and pipelines, the Commission sought testimony from the Office of the Attorney General and the Virginia Petroleum Jobbers Association. During the year prior to the 1990 Session, the staff of the Attorney General worked with both the oil industry and environmental groups to develop oil spill legislation that would protect Virginia's environment while at the same time not overly burden those subject to the legislation. During the course of these discussions, questions were raised regarding proposed financial responsibility requirements. Because of concerns expressed by the petroleum jobbers that liability insurance for releases from storage tanks was essentially unavailable and unaffordable, oil spill legislation introduced at the request of the Attorney General (SB 411) during the 1990 Session did not require a demonstration of financial responsibility by owners/operators of aboveground storage tanks. Instead the Commission was asked to study the question.

Mr. Steve Rosenthal, deputy attorney general, appeared before the Commission to present the Attorney General's position on financial responsibility for oil facilities. He emphasized that the Commonwealth has to be assured that owners/operators of such facilities have the financial capability to respond to spills. Two fundamental questions must be answered:

1. What risks do aboveground storage tanks and pipelines pose?

2. How do you ensure against those risks (i.e. what is the availability of insurance or other mechanisms)?

Mr. Rosenthal noted that some oil storage facilities pose a greater risk than others to the environment. He recommended that any determination as to the appropriate level of financial responsibility take into account such factors as location, proximity to water, size of facility, storage capacity, and the age and condition of the tanks.

The Commission also invited Ms. Gail Jaspen, assistant attorney general, to discuss the availability of environmental impairment liability insurance. She indicated that insurance is available but expensive, and further cautioned that economically available insurance "may be here today but gone tomorrow" as a result of changes in the economy, or state and federal regulation of the industry. Her survey of insurance indicates that there are four major sources of insurance for aboveground storage tanks: Front Royal and Federated Mutual, admitted licensed carriers, and AESIC and The Planning Corporation, which write on the surplus lines market (i.e., not licensed in Virginia). (These are discussed in detail on pp. 9-10 of this report.) In addition, to these four major sources, Ms. Jaspen indicated that a number of carriers write limited types of coverage, but, in many instances their minimum premiums are higher than those of the four companies writing full coverage.

According to Ms. Jaspen, Virginia law provides several alternatives for securing insurance coverage, apart from the commercial liability insurance market. The 1988 Session established authority for the operation of a joint underwriting association for commercial liability insurance, a pooling mechanism which would be triggered at the direction of the State Corporation Commission. She characterized it as a "last resort" insurance source. Not only must premiums be actuarially sound, but there is also a surcharge on the premiums for establishing a reserve fund, in case the premiums are depleted. Two other approaches, risk retention groups and joint purchasing groups, provide group insurance under a pooling arrangement.

The Commission received testimony from Mr. Frank Bedell, president of the Virginia Petroleum Jobbers Association, on the impact that the requirements of the Underground Petroleum Storage Tank Program have had on petroleum-related businesses. His organization represents small businesses, locally owned and operated, which supply virtually all the gasoline and petroleum products to customers in the rural areas of Virginia. Farmers, watermen, miners, county stores, small businesses, governmental facilities, and small retail outlets located outside the four major urban areas of the state depend on the jobbers for their fuel. He informed the Commission that the jobbers and their customers are under "extreme financial stress at the present time because of the national underground storage tank regulatory program."

There are two sets of UST regulations, the technical standards and the financial responsibility requirements. According to Mr. Bedell, it will cost approximately $30,000 to bring a tank into compliance with the technical standards. This means that a jobber who owns 30 to 40 tanks could expend approximately one million dollars to comply with the technical tank standards requirement. He emphasized that this represents a significant expense for which there is no return on the investment. The jobbers association has received reports from its members that more than 1,000 retail outlets in Virginia, mostly in rural areas, went out of business last year and another 2,000 are in jeopardy because of their inability to comply with UST rules.

The federal law also requires a demonstration of financial responsibility of one million dollars for owners of one to 99 tanks and two million dollars for owners of 100 or more tanks. This demonstration may be accomplished through a surety bond, letter of credit, guarantee, etc. But, according to Mr. Bedell, the "only practical option for most tanks owners ... is insurance." He characterized the cost of pollution liability for underground tanks as "soaring," while becoming "scarcer and scarcer." In fact, he concluded, availability of insurance diminishes as government regulation increases. For example, prior to passage of the federal UST law in 1988, numerous insurance companies wrote underground tank pollution liability coverage as part of their property and casualty coverage. But, as soon as the legislation passed, insurance companies began to write exclusions in their policies for underground tanks. Within a year, according to Mr. Bedell, the vast majority of insurance companies were out of the jobber insurance market entirely.

Although much of his testimony related to the regulation of underground tanks, Mr. Bedell suggested that the industry would experience a similar situation if the state placed financial responsibility requirements on owners of aboveground storage tanks. He questioned the need for such financial assurances in light of the 1974 federal requirement that aboveground tank owners comply with federal SPCC rules. While approximately half of the jobbers have aboveground tank insurance, the remaining owners, according to Mr. Bedell, would find such coverage either unobtainable or unaffordable. If a financial responsibility requirement were proposed, he recommended that, as is currently the case for owners of underground tanks, the Virginia Underground Petroleum Storage Tank Fund be used to help reduce the amount of financial responsibility aboveground storage tank owners must demonstrate.

C. Findings and Recommendations

During the course of its deliberations, the Commission was unable to reach a consensus on a specific financial responsibility requirement for aboveground storage tanks. The Commission does agree that the fundamental consideration in formulating such a requirement is the potential risk to the environment posed by oil handling facilities, whether they be aboveground storage tanks or pipelines. Therefore, any proposed financial responsibility statute should include a "risk of damage" standard which recognizes that certain facilities have a greater potential for causing damage to the environment than do others. This might be accomplished through the use of a "sliding scale," which weighs such factors as location, proximity to water, size of the facility, capacity, age and condition of tanks, nature of containment capability and history of operation when establishing the type and amount of financial responsibility required of an owner or operator.

The Commission is concerned that financial responsibility requirements assure that those doing business in the Commonwealth have the capacity to respond to a petroleum-related incident, while at the same time not threaten the financial stability of a small business. Thus, if the high costs and limited availability of pollution liability insurance have contributed to the closing of petroleum-related small businesses, further consideration should be given to modifying the current financial responsibility requirements on underground storage tanks. Perhaps a sliding scale, similar to that recommended for aboveground storage tanks and pipelines, could be adopted, with a lower level of financial responsibility required for small operators than for major ones. It is in the interest of the Commonwealth not to place at risk those businesses whose petroleum inventory represents a buffer between the Middle East production and our national supply.

II. FINANCING VIRGINIA'S DRINKING WATER NEEDS

During the summer, Chairman Parker appointed a twelve-member task force to look at ways to finance the future water supply needs of the Commonwealth. The task force, composed of representatives from the Virginia section of the American Water Works Association, the Virginia Water and Sewer Authority Association, the Virginia Manufacturers Association, the Department of Health, the Virginia Water Project, the Virginia Rural Water Association, the Association of Water Companies, small and large utilities, a deputy county administrator and a town manager, was requested specifically to consider the merits of HB 1115 as an alternative method of financing water supply projects. The bill, carried over from the 1990 Session, established the Drinking Water Protection Fund, which was to be used to finance needed improvements in water supply facilities. The Fund had five purposes: (i) to preserve or enhance the quality of water provided to residents, (ii) to alleviate adverse health conditions, (iii) to promote efficient use of Virginia's water supply, (iv) to allow orderly growth and development, and (iv) to ensure that Virginia retains the primacy of the Safe Drinking Water Program. Local government and private investor-owned companies which operate community waterworks would be eligible to receive grants and loans from the Fund. Monies in the Fund were to be allocated in the following manner: 40 percent for hardship grants, 40 percent for low or no-interest loans, and 20 percent for the Health Department to ensure compliance with drinking water standards. The Fund would be financed through an assessment on the owners of community waterworks of $.10 per 1,000 gallons of water produced, generating approximately $20 million annually. The revenue would be placed in a special account within the Virginia Water Supply Revolving Fund.

A. Report of the Task Force

The findings and recommendations of the task force (Appendix A) were presented to the Commission by Mr. George Williams, director of the Rivanna Water Authority, who served as chairman of the panel. Mr. Williams informed the Commission that while the recommendations of the task force were not always unanimously supported, they were approved by a majority of the members. (See Appendix B for dissenting opinion). Despite reservations regarding the lack of information on the specific types of problems of waterworks, the task force acknowledged that problems do exist and capital expenditures will necessarily increase under the Safe Drinking Water Act

(SDWA). A water withdrawal fee, as proposed in HB 1115, in the view of the task force, is not an appropriate method of generating revenues to finance water supply needs. Rather than special dedicated revenues, the task force favored the traditional method of general appropriations to capitalize financial assistance programs. The report recommends that the annual appropriation of $100,000 from the general fund to the Virginia Water Supply Revolving Fund (Va. Code § 62.1-233 et seq.) for financing water supply projects, be increased to $5.2 million for each of the next four years. The current fund balance is $318,500.

The task force report also calls attention to the fact that the retention of primary administration and enforcement of the SWDA (primacy) will result in additional costs to the Commonwealth. The report recommends that general administration and enforcement aspects of primacy continue to be funded through a general fund appropriation. It cautions that additional technical assistance will have to be provided to operators of water supply systems by the Health Department, in order to ensure compliance with the new amendments to the SWDA. Because these services represent substantial costs to the Health Department and are of particular benefit to the water systems as distinguished from the general public, the report recommends that an annual fee be imposed upon each public water supply permittee. Such a fee, according to the report, should be graduated to reflect the size of the population served. Annual fee payments would range from $250 to $160,000 with a cap of four million dollars on the revenue generated.

B. Survey of Needs

The selection of an appropriate financing mechanism should be based on a more extensive analysis of current water supply systems. Although available data does provide documentation on the type and frequency of water system violations, the information does not detail the type and extent of the various problems and needs. A 1985 survey conducted by the Health Department identified $1.9 billion in water systems infrastructure needs through the year 2000. This previous survey had several shortcomings. It made no attempt to distinguish between "needs" and "wants" and did not include the private investor-owned water system. The Commission, therefore, requested the Health Department to undertake a new survey of both public and private community waterworks, documenting the nature of each system's problems.

The Health Department agreed to conduct such a survey and mailed questionnaires to 1460 public and investor-owned water systems. The form (Appendix C) requested information on both "needs" and "wants." System "needs" were defined as those capital improvements necessary to correct or prevent (a) a documented public health hazard, (b) a drinking water quality problem, or (c) deterioration or deficiency in present facilities. Within each of these categories are four types of need: (i) source, (ii) treatment, (iii) distribution piping and pumping, and (iv) storage. System "wants" reflect funding that would allow an expansion of current systems.

Of the 1460 systems surveyed, 515 responded (35.2%). The response rate was significantly higher for publicly owned facilities (46.2%) than investor owned (29.03%). Eighty percent of the respondents represent small water systems, serving 3,300 people or less. Approximately 61 percent of the publicly owned systems and 12 percent of the investor-owned systems reported maintaining a capital improvement program.

TABLE 1
1990 Infrastructure Needs and Wants for Drinking Water Systems
($ millions)

		NEEDS				WANTS
Ownership	Number	(a)	(b)	(c)	TOTAL	
Public	245	6.80	53.491	332.146	392.437	1099.030
Investor	270	0.72	0.411	3.99	5.121	22.717
TOTALS	515	$7.52	$53.902	$336.136	$397.558	$1121.747

(a) Public health hazard
(b) Drinking water quality problem
(c) To correct or prevent deterioration of present structures

SOURCE: Health Department Survey

As Table 1 indicates, the estimated needs of those that responded to the survey will cost approximately $397.5 million compared to the system expansion costs of $1.2 billion. For both public and investor-owned systems the most costly "need" is correcting deficiencies in the facility. While the second most costly need of the public systems is the improvement of water quality, for private investor-owned systems it is the costs of correcting or preventing health hazards. The survey documents the total costs for remedying the public health hazards posed by both public and private systems as approximately $7.5 million, or two percent of the total need.

To supplement the survey, the Health Department conducted an in-house analysis of 243 systems. Forty-five of the systems analyzed by the Health Department also participated in the survey. For the remaining 198 water systems, the Department, using the same categories of need, estimated an additional cost of $72.5 million. When added to the results of the mailed survey, Health Department figures show the total costs of addressing the "needs" of 713 water supply systems as approximately $470 million.

C. Commission Action

It is apparent that the needs of both the public and investor-owned systems far exceed the available source of funding. In light of current budget constraints, the Commission is reluctant, at this time, to recommend specific financing mechanisms to meet the Commonwealth's water supply needs. Rather, the Commission, during the upcoming year, will devote much of its time to further consideration of this question as part of its effort to develop a comprehensive state water policy.

III. STRATEGIES FOR RESOLVING WATER SUPPLY CONFLICTS

Pursuant to its statutory authority to study all aspects of water supply and allocation problems in the Commonwealth, the Commission in the past has investigated water management options including interbasin transfers and the establishment of a statewide permitting authority. Recently the Commission recommended and the

General Assembly enacted legislation which established minimum instream flow requirements and created surface water management areas. In 1990, the Commission continued to investigate alternatives for managing the Commonwealth's water resources. Toward that end, the Commission received testimony from George Sherk and Jerry Muys, attorneys with the law firm of Will and Muys, which specializes in water law.

Mr. Sherk provided a context for his remarks by pointing out that the Commonwealth's population continues to grow, accompanied by increasing demands for water by industry, particularly for steam generation and crop irrigation. The population growth, however, has not followed the distribution of water within Virginia; "water rich" areas have not experienced an increase in economic activity or population that other areas in the state have had. Transfer of water offers one alternative to satisfy competing demands for water. Whether the transfer of water is considered as an interbasin, interjurisdictional or an interstate issue, a mechanism for resolution of conflict is needed. Testimony indicated five possible ways to resolve conflict: negotiation, litigation, legislation, interstate and intrastate compacts, and market resolution. Testimony considered by the Commission focused on legislative initiatives and compacts.

There are basically four legislative approaches to resolution of water transfer conflicts: a total prohibition on transfers; a prohibition on water transfer, unless the proponent can demonstrate no harm; allowance of the transfer, unless the opponent can demonstrate harm; and total allowance regardless of the impact on either basin. Of the eastern states which have addressed the issue of water transfers, few have reaffirmed the riparian doctrine without modification. For example, New Jersey has limited the distance water may be transferred and Maine prohibits the export of water in containers larger than ten gallons. New Hampshire prohibits the interbasin transfer of water from a "designated natural, rural or community river." Traditionally riparian rights states either allow transfers, unless the opponent can demonstrate harm, or prohibit transfers unless the advocate can demonstrate no harm.

Mr. Sherk described other states' approaches to interbasin transfers of water. California statutorily prohibits the transfer of water from one county to another if the water is necessary for development in the county of origin. The amount of water needed for development is determined by the state. Colorado prohibits transfers out of the Colorado River basin if the transfer would impair existing or future uses. Arizona and Oregon allow water districts and citizens' groups to veto a diversion. Oklahoma gives priority to intrabasin over interbasin transfers of water. The determination of priority is made every five years by the State Water Resources Board on the basis of beneficial uses within the basin. In Texas, a transfer cannot be approved if it prejudices persons or property in the donor basin. In determining whether the donor basin will be prejudiced, the nature of the donor basin is considered for a 50-year period. Similarly, Connecticut requires an environmental impact statement, which includes a determination of how the needs of the donor basin will be met for the next 25 years. Florida allows transfers so long as no local government objects. North Carolina allows transfers if the entire basin lies within the state. Other states which require some type of approval before a transfer takes place include Kentucky, Massachusetts, Georgia and South Carolina.

The guiding principle in water transfer statutes is protection of the donor basin, as measured in terms of the future needs of the basin. The question, however, is who makes the determination of the need of the donor basin: the donor basin, a state regulatory agency, a tribunal or the legislature.

In the transfer of water, compensation of the donor basin is a major issue. To compensate donor basin, revenues can be generated several ways. One option is a severance tax. The U.S. Supreme Court has affirmed a state's right to a severance tax with the limitation, however, that interstate commerce not be burdened. Commonwealth Edison Co. v. Montana, 453 U.S. 609, 101 S. Ct. 2946, 69 L.E. 2d 884 (1981). Transfer fees or transfer taxes provide a second method. The transfer fee's calculation could be based on measuring the cost of importing water to the importing basin against the next most expensive method of supplying water to the importing basin. A third approach, as enacted in Montana, is the appropriation of all unused water to the state itself. Use of a large quantity of water in Montana, such as is necessary in an interbasin transfer, requires a lease.

Once the revenue has been raised, the second issue is the allocation of the funds. One method is a jurisdictional approach in which the jurisdiction of the donor basin allocates the money; however, the basin of origin probably contains many jurisdictions. California anticipated this difficulty by enacting legislation establishing a loan fund allowing those several jurisdictions to apply for funds. Grants can also be made to the donor basin based on the present value of all income which is lost by the donor basin. A third use of the revenue is funding for programs which benefit the basin of origin. Nonmonetary forms of compensation include crop insurance, flood control benefits or fish and wildlife enhancement.

Several consequences follow allowing or prohibiting water transfers. If the diversion is permitted the donor basin may suffer the loss of its tax base. With less tax revenue, fewer services are available and the area might lose its marginal industries. The donor basin might also suffer environmental damage, such as instream flow loss. Prohibition of diversions can also cause problems such as a loss of growth and loss of an increase in the tax base in the importing basin. A balancing test of these costs and benefits has been suggested by Lawrence J. MacDonnell of the University of Colorado School of Law. Diversions would be allowed only in the case of three conditions: that the diversion is the "least-cost" source of water supply; that the benefits exceed all of the related costs; and no person's position in either basin is substantially worse due to the transfer.

Mr. Jerry Muys described the interstate aspects of resolving water conflicts. He finds federal legislation the least desirable method. In his estimation, federal law would turn a regional problem over to the members of Congress, who may have little knowledge of or interest in regional water supply issues. Interstate compacts, conversely, allow individual states to protect their interests in a contract and to resolve interstate water conflicts. After the states resolve the issues, Congress must approve the compact. Once the consent is given, the compact becomes a federal statute. The first water compact to address water resource issues was the Colorado River Compact in the 1920's. Since then there have been approximately 30 compacts dealing with water resource development matters.

Most water compacts have focused on the resolution of a single issue, such as allocation, planning or pollution. The two most recent compacts, the Delaware River Basin Compact (1961) and the Susquehanna River Compact (late 1960s), have taken a more comprehensive approach to water management. Mr. Muys characterized them as "very successful." However, for a variety of reasons, most water compacts have proven ineffective. Ones which authorized water allocations were based on outmoded data and the allocations did not take into account environmental considerations. For example, the Colorado River Compact reserves a specified number of acre feet in the upper and lower basins for future use. In the upper basin states, the application of water quality controls has resulted in restraints on uses, resulting in greater flow to the states downstream than contemplated when the compact was drafted. Quantity of water must also be considered in conjunction with quality, environmental issues, and compensation.

The shortcomings of the older compacts have been superseded by the approach taken by the Delaware River Basin. In 1961, after years of litigation regarding the Delaware River, New York, New Jersey, Pennsylvania and Delaware entered into the Delaware River Basin Compact. The four states entered into the compact with the United States as a partner, a dramatic change from prior compacts. The Compact Commission, made up of representatives from the four states and a representative of the federal government, exercise continuing administrative authority over the Delaware River Basin. The authority is not "simple allocation, not inflexible standards" but coordination among the states and their agencies. Mr. Muys called the compact "very impressive" and a model for future compacts. The compact was unprecedented in that the United States was willing to join a compact where it received one equal vote. The federal representative is bound by the majority vote of the Commission, unless there is a violation of national interest. In such a case, the President of the United States is authorized to withhold federal consent.

The testimony by Mr. Muys and Mr. Sherk provided the Commission with valuable background information on water compacts and the other approaches states have taken toward managing their water resources. The Commission will consider the policy implications of various management strategies during its 1991 deliberations.

APPENDIX A

REPORT

ON

PROPOSED

DRINKING WATER PROTECTION

FUND

BY

TASK FORCE

SUBMITTED TO

STATE WATER COMMISSION

AUGUST 1990

REPORT OF DRINKING WATER PROTECTION FUND TASK FORCE

I. Introduction

At the request of Delegate Lewis W. Parker, Jr., Chairman of the State Water Commission, a Task Force was convened to review House Bill No. 1115 (which was introduced in the 1990 General Assembly and carried over for further consideration in the 1991 General Assembly) and to make recommendations to the State Water Commission on legislative needs to prepare Virginia for dealing with funding future water supply needs of the Commonwealth.

HB 1115 contained two issues the Task Force addressed (1) a Financial Assistance Construction Program for Waterworks and (2) Virginia's need to retain and fund primary enforcement authority (PRIMACY) for Federal drinking water regulations along with the State's traditional role of technical assistance.

This report presents the findings of the Task Force.

II. Need For Financial Assistance Program

The Task Force (TF) is grateful for the efforts of Allen R. Hammer and his associates at the State Health Department (SHD) in supplying the TF with additional information on the number, type and size of water systems in the Commonwealth and the number, type, frequency, etc. of Safe Drinking Water Act (SDWA) violations associated therewith. (See Exhibit 1)

Despite this information and other information made available during consideration of the proposed Drinking Water Protection Fund legislation (HB 1115) by the 1990 General Assembly, the TF notes that there is not yet enough information available to adequately quantify and characterize the specific

types of problems facing water systems, for which the proposed fund was to be created.

That is to say, how many systems need additional or improved sources of supply; how many need repairs or replacement of pumps or distribution systems; how many need additional reservoir capacity or covers over their reservoirs or protection against contamination of groundwater supplies; how many need chlorination facilities; or how many need attention to a myriad of other items that would ensure a more reliable and safe source of drinking water? What is the estimated cost associated with each of these system deficiencies? What is the relationship of the capital needs and the extent of the "fiscal stress" associated with each of these that necessitates making available some form of financial assistance? (See report # 4 referenced in Exhibit 2). This information is desirable and does not currently exist.

Despite this situation, however, the TF is willing to accept the premise that there are water supply problems presently existing and that with the increasing requirements being imposed under the SDWA there will be an increasing number of problems the solutions to some of which will require some form of financial assistance.

The proposed Drinking Water Protection Fund legislation (HB 1115), which the TF has been asked to consider and evaluate, offers one of several possible forms of financial assistance programs. It is unique in Virginia in that the basis of the program funding would be the establishment of special dedicated revenues, as contrasted with the traditional method of funding financial assistance programs out of general State revenues.

Otherwise, it would accomplish no more than can be accomplished under the already existing Virginia Water Supply Revolving Fund (VWSRF) legislation enacted in 1987 (Section 62.1-233 et seq. of the Code of Virginia 1950, as amended).

The TF endorses the long-standing principle that water systems should be financially self-sufficient. But, it recognizes that there can be some situations where for a variety of reasons some form of financial assistance may be either desirable or necessary. In these cases, the assistance should be made available in the form of loans at interest rates adapted to the prevailing circumstances, which could range from zero interest rate to full market rate. Grants should be an exception and should be limited to those cases where there is a health hazard declaration by the State Health Commissioner, natural disaster and/or extreme fiscal hardship.

The majority of the TF also believes that the traditional method of funding loan/grant programs from general State revenues is the appropriate method of funding.

Special funding, whether based on water production, water sales or some other type of special assessment on water utilities would constitute a regressive utility tax on drinking water. In reality, it would simply transfer money from the customers of the larger, urban water systems (many of whom are themselves fiscally stressed) to aid the smaller, rural water systems, whose customers may or may not be fiscally stressed. In addition the utility management may or may not have done all that may be desirable or necessary to improve the financial well-being of these systems. As a matter of public policy, if financial aid is

to be provided in such cases, it should be funded by all of the taxpayers of the State out of general State revenues just as other societal needs are funded.

All things considered, the TF sees no need to develop a specially-funded financial assistance program when all of the tools required to provide assistance already exist under the VWSRF legislation. It recommends, therefore, that no further action be taken on HB 1115, but rather that the existing VWSRF legislation be utilized and that adequate funding thereof be provided.

Funding Requirements

Since the enactment of the VWSRF in 1987, the General Assembly has appropriated the sum of $100,000 for each of four fiscal years (FY1989 - FY1992), for a total of $400,000. The balance in the fund at the present time is in the order of $318,500 ($300,000 in prior and current fiscal year appropriations plus $18,500 interest earnings). No loans or grants have thus far been made out of the fund. This might suggest that there are no problems which need financial assistance. The TF would rather think that this situation is due to the general lack of awareness of the existence of the fund throughout the water supply industry, the relatively small amount of funds available and the fact that privately owned systems are not eligible for assistance.

Accordingly, the TF recommends that the SHD advertise more vigorously the existence of the fund by special mailings to each of the permitted public water suppliers and publicize the procedures and criteria which are to be used in determining the

approval/disapproval of applications for assistance.

The TF notes that under the VWSRF legislation only publicly owned or governmental water systems are eligible for assistance. The TF generally agrees with this concept. However, it recommends that the legislation be amended to permit the making of loans to privately owned water systems which are regulated by the State Corporation Commission (SCC) and which serve a population of 3300 persons or less. These very small and small water systems are reportedly where most of the water supply deficiencies are known to exist (Exhibit 1). Grants should NOT be made available to privately owned systems.

The Joint Subcommittee of the General Assembly Studying Water Supply And Wastewater Treatment which made the recommendation for the enactment of the VWSRF in 1987 also recommended an annual appropriation of general State revenues at a level of $10 million. As noted previously, annual appropriations to date have been limited to $100,000. More recently (1989), both the Virginia Association of Counties and the Virginia Water Project, Inc., have recommended an annual appropriation of $10 million.

Recognizing present constraints on general State revenues and pending the availability of more definitive information that would quantify specific needs, the TF recommends an annual appropriation of $5.2 million during each of the next four fiscal years (FY 1992 - 1995), including $5 million for loans and $200,000 for grants.

Surely the provision of an ample and safe supply of drinking water throughout the Commonwealth at an initial annual cost to

the general taxpayers of $5.2 million is as important as the proper disposal of wastewater, which is now being funded in part by the taxpayers at a level of $10.2 million per year from general State revenues.

The TF also notes that the General Assembly has recently appropriated $450,000 of general State revenues to the Virginia Water Project for assisting low income communities and individuals with grants for development of facilities. The TF urges the Water Commission to recognize these precedents and seek an annual appropriation of at least $5.2 million for the VWSRF.

III. Primacy

Retention of primary administration and enforcement of the SDWA (primacy) by the Commonwealth of Virginia will result in additional costs to the Commonwealth, just as has been, and will be, the case with a number of other Federal and State mandated programs. The TF believes that these programs benefit the general public and that the costs thereof should be funded out of general State revenues, just as the current costs of SHD water supply programs and State Water Control Board (SWCB) wastewater programs are funded.

On the other hand, the TF recognizes that the SHD provides a wide variety of technical services to water system owners and operators throughout the Commonwealth, including operator certification, engineering evaluation and advice, laboratory analysis, training seminars, etc. Compliance with the SDWA undoubtedly will require an increase in technical assistance activities by the SHD.

These services represent a substantial cost to the SHD and are of peculiar benefit to the water systems as distinguished from the general public. The TF recommends that the SHD impose an annual permit fee upon each public water supply permittee to assist in defraying some part, or all, of the costs of providing these technical services.

Such a fee should be graduated to reflect the size of the various water systems as measured by the population served. (see Exhibit 3). The TF recommends that the annual fee payments should range from $250 to $160,000 as shown in Exhibit 3 in order to generate revenues of not more than $4 million per year. The TF further recommends that the permit fee be initiated with the fiscal year beginning July 1, 1991 and, if necessary, that legislative authority therefor be sought in the 1991 General Assembly.

IV. Other Considerations

The TF is concerned about the circumstances which have contributed to the occurrence of the majority of the violations among water systems - particularly the smaller, privately owned systems. There seems to be an apparent lack of responsibility and accountability - either fiscal, operational or managerial- which often prevents required remedial action from taking place. Certainly, the customers of these systems should not be left without some form of relief. Constraints of time have prevented the TF from investigating this aspect of the subject in the manner considered necessary.

Among the items which should be examined are the deficiencies in existing State and local legislation/regulation

which allow water systems to come into being without appropriate safeguards against fiscal and operational irresponsibility and what amendments might be necessary to remedy these deficiencies. Also, attention should be given to the mechanics by which many of the smaller, fiscally stressed systems may be consolidated, regionalized, etc. so as to become financially self-sufficient, including acquisition and/or operation by governmental or other entities.

This may necessitate the broadening of existing legislation/regulation if not the enactment of new legislation/regulation. The TF is willing to undertake a further examination of this matter if the Water Commission so desires. Otherwise, it recommends that the Water Commission appoint another Task Force to consider the matter.

V. Recommendations

1. That water systems be strongly encouraged to become and remain financially self-sufficient.
2. That financial assistance for water systems be handled through the Virginia Water Supply Revolving Fund as adopted in 1987 and used as herein recommended.
3. That annual appropriations under the program be increased to $5.2 million for each of the next four fiscal years.
4. That any grant program be limited to publicly owned systems in cases of public health hazard necessity combined with extreme fiscal hardship.
5. That existing funds/regulations for drinking water assistance programs be publicized and promoted by the Department of Health.

6. That the specific needs of the water industry be more closely identified. This could be done by a cooperative effort between the State Health Department and the water industry.

7. That primacy be retained by the Commonwealth of Virginia and that funding therefor continue to be from general State revenues as other public health programs are funded.

8. That a permit fee be instituted July 1, 1991 to defray the cost of technical assistance provided by the State Department of Health. The revenues generated should not exceed $4 million with annual fees ranging from $250 to $160,000 (see Exhibit 3).

9. That existing legislation be amended to permit the making of loans to privately owned water systems which are regulated by the SCC and which serve a population of 3300 persons or less.

10. That further review be made of existing State and local legislation/regulations and steps be taken to prevent water systems from being constructed without appropriate safeguards against fiscal and operational irresponsibility.

Respectfully submitted,
George W. Williams
Chairman

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EXHIBIT 1
VIRGINIA WATER SYSTEM DATA
CALENDAR YEAR 1989

SYSTEM SIZE	POPULATION RANGE (PERSONS)	NUMBER OF SYSTEMS	PRIVATELY OWNED	PUBLICALLY OWNED	WATER PRODUCTION MG/YEAR	% SYSTEMS	% PRODUCTION	VIOLATIONS MICRO MCL	VIOLATIONS MICRO M/R	VIOLATIONS FLUORIDE MCL	VIOLATIONS FLUORIDE M/R	VIOLATIONS RAD M C L	VIOLATIONS RAD M / R
Very Small	Less Than 500	1198	866	332	8353.22	76.21%	3.85%	355	810	61	0	2	0
Small	501-3300	237	54	183	10451.05	15.08%	4.81%	21	61	5	0	0	0
Medium	3,301-10,000	68	2	66	18690.67	4.33%	8.61%	6	10	0	0	0	0
Large	10,001-100,000	57	4	53	66202.68	3.63%	30.48%	2	1	0	0	0	0
Very Large	Greater Than 100,000	12	1	11	113504.40	0.76%	52.26%	0	0	0	0	0	0
	TOTAL	1572	927	645	217202.02	100.00%	100.00%	384	882	66	0	2	0

E X H I B I T 1 (CONT'D)

ANALYSIS OF COMMUNITY WATER WORKS DATA SUPPLLIED BY S.H.D.

OBSERVATIONS:

1. Most of State's water is provided by large & very large systems (83% by 12 systems)
2. Majority of State's water systems are in very small size (76%)
3. Most of State's water systems are small & very small (91%)
4. Most of State's very small systems are individually/investor owned (59%)
5. Most of the State's systems serve less than 200 people (60%)
6. Most smaller systems rely on ground water
7. Most larger systems rely on surface water
8. Most violations are in the very small systems
9. Most violations are in the investor owned systems
10. Seldom do very large systems have violations
11. Problem systems are fairly evenly distributed through the State

CONCLUSIONS:

1. Most rural systems are small
2. Trailer parks account for a large portion of the violations
3. Most small systems lack adequate training and/or management

UNANSWERED QUESTIONS:

1. Are there systems with health related problems (unsafe)?
2. What are the real costs of system upgradings to bring systems into compliance?
3. How many M.C.L. violations are critical to public health?
4. How many of the violations are simply not sampling?
5. Why do systems fail to sample?
6. Are small systems inadequately financed?
7. Are water rates in the problem systems being raised as needed?
8. Why has enforcement been ineffective?
9. What training/help can the S.H.D. give small systems to help them?

EXHIBIT 2

Handout information received from Division of Water Supply Engineering (Virginia Department of Health)

1 - July 18, 1989 Secretary of Human Resources briefing document

2 - VDH Report to HJR 7 subcommittee re: funding history for construction

3 - VDH Report to HJR 7 subcommittee re: projected funding availability

4 - 1985 "Infrastructure Needs for Publicly Owned Drinking Water Systems"

5 - Current list of available funding sources

6 - House Document No. 13 (1987) reporting on water supply and wastewater treatment

7 - VDH December 1989 presentation to State Water Commission

8 - VDH December 1989 presentation to Supplement showing infrastructure needs of publicly owned waterworks ∠ 3300 population

9 - VDH Jan. 1990 presentation to State Water Commission-showing microbiological violation (4 pages)

10 - VDH showing 1986 waterworks production amounts (3 pages)

11 - VDH fluoride draft report showing removal costs (Tidewater)

12 - VDH computer printout showing community type waterworks by population range

13 - VDH computer printout showing nontransient noncommunity

14 - Update on water production records to 1989 quantities

15 - Microbiological MCL violations (13 pages)

16 - Microbiological monitoring violations (6 pages)

17 - Fluoride MCL

18 - Overview showing waterworks grouping, production and violations

EXHIBIT 3

RECOMMENDED SCHEDULE OF PERMIT FEES

SYSTEM SIZE	POPULATION SERVED	NO. OF SYSTEMS	% TOTAL	RECOMMENDED ANNUAL FEE $	TOTAL REVENUE GENERATED $	EQUIVALENT CHARGE CENTS PER/1000 GAL. WATER PRODUCED
Very Small	Less Than 500	1198	76	250	299,500	3.59
Small	501-3300	237	15	1,000	237,000	2.27
Medium	3,301-10,000	68	4	5,000	340,000	1.82
Large	10,001-100,000	57	4	20,000	1,140,000	1.72
Very Large	Over 100,000	12	1	160,000*	1,920,000	1.69
		1572	100		3,936,500	

* Recommended Maximum Fee

Appendix B

VIRGINIA WATER PROJECT, INC.

water is life

2 August, 1990

Delegate Lewis Parker, Jr.
P.O. Box 120
South Hill, Virginia
23970

Dear Mr. Parker:

Since April I have been a member of the Alternative Finance Task Force which has been reviewing H.B. 1115 in particular, funding needs for Virginia Department of Health administrative costs, and public water system compliance cost issues in general. The report of the Task Force you will soon receive if you have not already.

Virginia Water Project has declined to give its endorsement of the Task Force's report. This letter constitutes our "minority report" on the Task Force's findings, and ends with suggestions on how we might proceed from here. I send this letter as I will be unable to be at the Water Commission meeting on the 16th. (Wilma Warren and I are leaving August 3rd for Poland and will not be back until the 18th. We have received Aspen Institute Fellowships to give organizational and network training to a newly established rural water supply development foundation in that country.)

There is much in the report which we find unacceptable. As we do not wish the tone of this letter to be totally negative, however, I will begin by highlighting some points where we *do* agree with the Task Force's findings. For example, we view it a very positive step that the Task Force was willing to recommend increases in permit fees to cover a major portion of the Virginia

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Department of Health's primacy administration costs, even though the Task Force has avoided describing it as paying for a portion of primacy administrative costs.

We likewise strongly concur with the report's language which encourages an examination of controls which would prohibit the establishment of small, privately owned water systems without local approval and safeguards against financial and operational irresponsibility, and issues of consolidation and regionalization of water system infrastructure and management. Over time we will have to develop policy to evaluate the continued existence of small systems who cannot achieve an administrative economy of scale to survive in a more complex regulatory environment.

We concur that in light of current state budget constraints, and a still ill-defined financial hardship need, that the Water Supply Revolving Fund be capitalized *initially* at a level below the $10 million which has been requested for the previous three years. We must note, however, that even at the $10 million level, we are hardly addressing the real needs addressed by the Virginia Department of Health. While agreeing on an initial funding level, we emphatically do not agree that the capitalization schedule be no more than four years.

Despite these points of agreement, after a final review by myself, other staff, and by our Executive Director Wilma Warren, Virginia Water Project cannot endorse the report for the following reasons:

- It is our judgement that the credibility of the report is compromised by the Task Force's failure to acknowledge and cite best available evidence on Safe Drinking Water Act compliance costs as reported in House Document 30, *The Impacts of the 1986 Amendments of the Safe Drinking Water Act on the Commonwealth of Virginia* by the Virginia Department of Health. The majority of the Task Force repeatedly chose to treat as irrelevant this report, and, most specifically, the $51 to 143 million estimated cost impacts, and other impact information on pages 50 and 51 of the report. We find this absolutely unacceptable.

There will never be perfect data on which to make public policy decisions. Over time we can have much better data on the issue, but to refuse to cite what is available is incomprehensible. After trying to make a case that there is no supporting data, the Task Force report accepts the *premise* that there are water supply problems that will require financial assistance. If information exists to support a reasonable premise, it must be so for basic policy decisions. I don't believe that the detailed specific information was required for the Wastewater Revolving Loan Fund, why should it be any different on the drinking water side? At the heart of the issue is an understanding of how much information is sufficient for public policy decision making. Citing insufficient detailed information of the sort they are looking for is an excuse for not taking responsible action.

- It is our judgement that the credibility of the report is seriously compromised by the failure to acknowledge and cite documentation of alternative financing methods employed in other states. The inherent bias of the report is demonstrated that Virginia Water Project's report on alternative financing is not even evaluated, much less referenced. The report's analysis and justification for relying on "traditional sources of funding" is insufficient. There is no discussion of current constraints on general fund revenues, other existing specially dedicated revenues, such as the 50 cent tax on the sale of new tires which goes to the Department of Waste Management, or current legislative mandates for the Secretary of Natural Resources to examine alternative sources of revenues for programs under her jurisdiction. Legislative requirements that the Virginia Department of Health study alternative funding sources for administrative costs is likewise unmentioned. Task Force appeals to "traditional" sources of funding are made in a reality vacuum.

- The Task Force majority recommends that the Virginia Water Supply Revolving Fund be capitalized at a level of $5.2 million from the General Fund. I repeatedly reminded them that with the current budget constraints, they had better take a stand on where in the General Fund the $5.2 million was going to come, either in other program cuts, or in new revenues. They refused to consider such recommendations. I find this irresponsible. If you are going to tell legislators to take it out of the General Fund, one ought to be

obligated to give support by offering options on where the money is going to come from.

• The report cites that a utility tax on water would be inherently regressive. There is certainly potential for this, but as VWP stated in its Alternative Financing report and subsequent testimony, this need not be the case if fees are assessed on a formula based on system size (as the Task Force report advocates for permit fees) and per capita income.

• Their real position on a utility tax is apparent in the last paragraph on page three. The report states that "In reality, it would simply transfer money from the customers of the larger, urban water systems (many of whom are themselves fiscally stressed) to aid the customers of the smaller, rural water systems, whose customers *may or may not be* fiscally stressed. In addition the utility management *may or may not* have done all that may be desirable or necessary to improve the financial well-being of their systems. As a matter of public policy, if financial aid is to be provided in such cases, it should be funded by all taxpayers of the state out of general state revenues just as other societal needs are funded." (Emphasis added.)

The Task Force insisted on the above quote despite testimony from Donald Wampler of the Virginia Water Control Board who manages the Wastewater Revolving Loan Fund Program. Mr. Wampler described how such a program can be developed to assure that financial assistance will not go to those who haven't taken every effort to be self sufficient and managerially responsible. This is another clear example of where the Task Force's failure to acknowledge and cite evidence inconvenient to their position seriously erodes the credibility and consequent legitimacy of the report.

Avoiding any analysis which could give any possible evaluation of alternative financing methods was the chief goal of most members of the Task Force. Once they swept away off the table any notion of a utility tax, they were quite willing to concede that perhaps there is a real need, and talk about conditions for financial assistance. This accounts for the rather confused tone regarding their attitude towards a financial assistance package of one form or another.

Agreeing to a permit fee program was the one real recommendation they felt they had to make. You will note, however, that the report carefully avoids saying that permit fees would underwrite primacy administration costs. It is to go for "technical assistance" provided by VDH. They are very aware, and nervous, over the precedent being set of underwriting all or part of administrative costs from primary beneficiaries. Their admonition that all water systems be self-sufficient does not apply to regulatory costs incured by the state on their behalf.

Recommendations

The financial needs for both SDWA primacy administration and small system compliance costs are real. The current budget constraints on the Commonwealth are likewise real. The following recommendations suggest solutions in the context of this reality.

Virginia Water Project strongly approves of using water system permit fees as one method to support primacy administration costs of the Virginia Department of Health. As the report states, water systems should be self-sufficient. To this end, water systems, and water consumers, as *primary beneficiaries*, should primarily underwrite primacy administration costs. Doing so would establish causality between public water benefits, and public costs to the state to provide those benefits. Breaking out administrative costs would minimize some of the confusion over to whom was to be allocated the assessment recommended in H.B. 1115.

To create coherent, streamlined legislative language in support of a loan and grant program, all revenues generated for any source must be clearly understood as capitalizing, all, or in part, the existing VDH Water Supply Revolving Fund. This would end the confusion and objections raised at the bottom of page 2 and the top of page 3 of the Task Force report. Grant money can be isolated in a separate account and distributed when conditions are met which demonstrate their need.

Capitalizing a loan and grant fund can come out of one of two broad sources: 1) General Revenue Funds, or 2), a dedicated revenue collected from some alterative financing mechanism.

From the General Fund there seem to be three options. The first is to cut program costs elsewhere in the state budget and reallocate to capitalize the revolving fund. Some on the Task Force feel that $5 million is little more than pocket change, and could easily be redirected from other sources. I am less sanguine on this point.

The second option is to increase the sales tax a 1/2 percent. I am told this would generate an additional $500 million to the State treasurer. Given existing budget shortfalls, and the local needs identified in the Local Infrastructure Study Commission, this is worth exploring. I am not prepared to say what are the political implications of this.

The third, and most interesting, option is to increase general fund revenues to support a water loan and grant fund, is to remove the exemption of the sale of water from the sales tax. I am not sure at this point how much revenue it would generate, but I am sure it would be more than enough to address the small water system financing needs. In addition, it would return revenue to the localities. We recognize that this, too, would face political headwinds in the face of historic support to remove the sales tax from food and other items. Nonetheless, as a short term option it merits evaluation.

The second broad option for capitalizing a loan and grant assistance program is the water utility tax mechanism highlighted in our report of last December (and finally reprinted this Summer) and in H.B. 1115. If a permit fee program to subsidize primacy administration costs can be implemented, this would allow for any water utility tax revenue to specifically go to capitalizing the loan and grant fund. If the $5.2 million funding recommendation of the Task Force is used, this will require a utility tax of a 3 cent assessment per 1,000 gallons of water sold. This will have a yearly per connection impact of $4.60. This averages out to a monthly increase of 38 cents a month.

A 5 cent per 1,000 gallon utility tax will generate $10.6 million dollars per year. This can begin capitalizing the loan fund at the $10 million dollar level requested for the past three years, with 3 to 4 hundred thousand dollars for grants. The per connection annual cost impact will be approximately $7.65. This averages out to a monthly increase in a water bill of .64 cents.

I think it is best not to focus to much attention on whether a utility tax is 3 or 5 cent per 1,000 gallon assessment. *The most critical element is to get acceptance and passage of alternative financing concepts, such as a dedicated water utility tax, as a legitimate source of revenue collection. This is the most challenging hurdle at this point.* If we can get consensus on this, we can fine tune the actual amount up or down as conditions warrant.

I hope this has been of use in evaluating the merit of the Task Force report, and in furthering the development of sound, reasonable options so the challenging issues we face can be resolved.

Sincerely,

Jason Gray
Manager of
Environmental Programs

cc: Wilma C. Warren, Executive Director
Water Commission Membership

Appendix C

COMMONWEALTH of VIRGINIA

C.M.G. BUTTERY, M.D., M.P.H.
COMMISSIONER

Department of Health
Richmond, Virginia 23219

September 12, 1990

Dear Sir:

We are attempting to gather updated infrastructure needs data from the State's waterworks (excluding state and federal). This data will be used to evaluate the 1985 survey's results and to determine the needs of the localities. This survey will aid your General Assembly members in their evaluation of present financing mechanisms and in their discussions on state financial assistance (loans and/or grants) for waterworks.

Your assistance in completing the attached form with your best estimate of projected costs will be greatly appreciated. Please forward your response to me by 02 November 1990 by using the enclosed addressed envelope. This data is necessary so the completed report can be given to the General Assembly's State Water Commission members in mid-November 1990.

Please note that system needs are capital improvements to solve a documented public health hazard or drinking water quality problem or to correct or prevent deterioration of present structures. This need differs from system wants that would allow system expansion.

A public health hazard example is where a boil water notice is in effect because the waterworks cannot deliver a good quality of water, where nearby residences need water service because failing septic tanks or other problems cause their wells to be polluted, etc.

A water quality problem is where source water is contributing to system problems i.e. turbidity levels are fluctuating and filtration/disinfection is required, iron levels are causing red water problems and treatment is needed, etc.

Deterioration or deficiency of present facilities is where pipelines are old and no longer carry adequate flows at adequate pressure and continually break or leak, where the storage tank is leaking or needs repair, etc.

If you have any questions, please do not hesitate to contact me at 109 Governor Street, Room 924, Richmond, Virginia 23219 or phone at 804/786-5566.

Sincerely,

Thomas B. Gray

Thomas B. Gray, P.E.
Office of Water Programs
Division of Water Supply Engineering

Enclosures

VDH

VIRGINIA DEPARTMENT OF HEALTH
INFRASTRUCTURE SURVEY SHEET - DRINKING WATER

PLANNING DISTRICT _____

COUNTY/CITY _____

POP SERVED: _____

COMPLETED BY: _____

TITLE: _____

DATE: _____

Do you have and maintain a a capital improvement plan? Yes or No

---

I. SYSTEM NEEDS - Existing facilities that need improvements to correct or prevent: (a) a health hazard, (b) a water quality problem, or (c) deterioration or deficiency in present facilities.

		REASON a	REASON b	REASON c	ESTIMATED COST
A. SOURCE:					
B. TREATMENT:					
C. DISTRIBUTION PIPING & PUMPING:					
D. STORAGE:					
	TOTAL				

II. SYSTEM WANT - Those capital improvements that will allow growth to year 2000.

A. SOURCE:		
B. TREATMENT:		
C. DISTRIBUTION PIPING & PUMPING:		
D. STORAGE:		
	TOTAL	

VIRGINIA DEPARTMENT OF HEALTH
INFRASTRUCTURE SURVEY SHEET - DRINKING WATER

PLANNING DISTRICT 24

COUNTY/CITY Example County

POP SERVED: 130

COMPLETED BY: J. O. Nail J.O.Nail

TITLE: Mayor

DATE: Oct. 5, 1990

Example Waterworks
Example, Virginia

Do you have and maintain a a capital improvement plan? Yes or (No)

I. SYSTEM NEEDS - Existing facilities that need improvements to correct or prevent: (a) a health hazard, (b) a water quality problem, or (c) deterioration or deficiency in present facilities.

		REASON a	REASON b	REASON c	ESTIMATED COST
A. SOURCE:	well		boil notice by VDH		$ 15,000
B. TREATMENT:	ion exchange		iron		$ 70,000
C. DISTRIBUTION PIPING & PUMPING:	1000 feet 6" PVC			low pressures in old 2"	$ 15,000
D. STORAGE:	10,000 gallon atmosphere tank			old tank is rusted out	$ 15,000
				TOTAL	$115,000

II. SYSTEM WANT - Those capital improvements that will allow growth to year 2000.

		ESTIMATED COST
A. SOURCE:	2nd well	$ 15,000
B. TREATMENT:		
C. DISTRIBUTION PIPING & PUMPING:	800 feet 6"	$ 12,000
	400 feet 4"	$ 4,800
D. STORAGE:	10,000 gallon atmospheric	$ 15,000