

ANNUAL REPORT OF THE

State Water Commission

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



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REPORT OF THE STATE WATER COMMISSION

TO: The Honorable George Allen, Governor,
and
the General Assembly of Virginia

INTRODUCTION AND AUTHORITY FOR STUDY

The State Water Commission is a permanent agency of the Commonwealth directed by statute to (i) study all qualitative and quantitative water supply and allocation problems in the Commonwealth, (ii) coordinate the legislative recommendations of other state entities responsible for water supply and allocation issues, and (iii) report annually its findings and recommendations to the General Assembly and the Governor.¹

The Commission met in July, September and December of 1993 and in January of 1994. The July and December meetings focused on the potential for the state to increase its role in the management and development of the state's water resources. Staff of Legislative Services presented an overview of water law in Virginia, a number of the potential options for a state's involvement in water resource management and draft statutes covering a variety of potential roles for the state and localities in water planning, allocation, dispute resolution and development. The Water Division of the Department of Environmental Quality outlined the current and projected water supply and demand for the Richmond and Hampton Roads areas. The Army Corps of Engineers presented its experience with a national drought study and new computer technology available for water supply planning. An update on the Lake Gaston project was received. The Hampton Roads Planning District Commission provided a water supply position statement.

The September and January meetings focused on small waterworks (pursuant to HJR 652) as well as on ground water issues in the Eastern Virginia and Eastern Shore Groundwater Management Areas. Proposals were received and endorsed to increase the viability of small waterworks. Details of this study can be found in House Document No. 89. Representatives from Southeastern Virginia expressed concern over the ability of that area to obtain sufficient water under the Ground Water Management Act of 1992. The Commission endorsed recommendations to ease ground water withdrawals in the ground water management areas found in Southeastern Virginia. In addition, the Commission received a briefing from the Virginia, Maryland and Delaware Association of Electric Cooperatives on the

¹ Va. Code § 9-145.8.

potential for the cooperatives to aid in the provision of local water and sewer services.

There were several changes to the membership of the Commission in 1993. Senator Charles J. Colgan, previously vice chair, replaced Delegate Lewis W. Parker, Jr., as chair of the Commission. Delegate J. Paul Council, Jr., was elected vice chair. Sandra Batie, Ph.D., an at-large member, moved out of state and therefore resigned her position.

The State Water Commission members would like to take this opportunity to acknowledge the many years of dedication and leadership provided by Delegate Parker who no longer serves on the Commission. Significant advancements were made in water supply, allocation and protection due to Delegate Parker's hard work and concern for the citizens of the Commonwealth.

This report is divided into three parts. The first deals with issues brought to the Commission by the electric cooperatives and by localities in Southeastern Virginia. The second covers presentations made to the Commission regarding water supply and planning issues in the Commonwealth. The third provides background information on water law in Virginia and potential options and structures for an increased role of the State in water-resource development, planning and management.

I. GROUND WATER MANAGEMENT ACT OF 1992; ELECTRIC CO-OPS ROLE IN LOCAL PROVISION OF WATER AND SEWER SERVICE

During 1993 the Commission received testimony regarding a potential role for electric cooperatives in the provision of water and sewer service and on the concerns of localities in Southeastern Virginia over the impact of the Ground Water Management Act of 1992² on that area. The testimony on these two topics is summarized below:

1. Electric cooperatives' potential role in local water and sewer services

The Virginia, Maryland and Delaware Association of Electric Cooperatives presented the Commission with a proposal which would enable electric cooperatives to support efforts that would improve local water and sewer service. The proposal was spawned from the federal Rural Electrification Loan Restructuring Act of 1993 which allows electric cooperatives to receive grant money from the Rural Development Administration (formerly known as the Farmers Home

² Va. Code § 62.1-254 et seq.

Administration) within the United States Department of Agriculture. Eight hundred thirty-four million dollars in loans and five hundred million dollars in grants are available under this program for fiscal year 1994. The loans and grants are available for the installation, repair, improvement and expansion of water lines, pumping stations, wells, storage facilities, and sewage treatment and collection operations.

A number of states have already granted electric cooperatives the clear authority to assist with the provision of water and sewer services. States with the most active programs include North Carolina, South Carolina, Georgia, Alabama, Arkansas, Florida and Indiana.

The Association proposed that it be made clear in state law that Virginia's electric cooperatives have the authority to support water and sewer efforts. This would enable them to access federal resources. The proposal would not mandate service by the co-ops but would allow them to work with local governments to determine opportunities where co-ops can help respond to local needs.

The electric co-ops are in a position to provide the structure to support entities established to deliver water and sewer service to nonurban areas. The cooperatives have strong local ties and have experience with providing rural utility service. Providing co-ops with the requested authority would enable them to provide additional resources to support local economic development through water and sewer infrastructure development.³

2. Ground Water Management Act of 1992.

Louis L. Guy, Jr., Norfolk Director of Utilities, expressed the concerns of Southeastern Virginia on the impact of the Ground Water Management Act of 1992 on that area. The Norfolk area has 700,000 residents (11 percent of the State's population) and the world's largest naval base, and supplies water to a number of jurisdictions. Due to low water conditions, its water system is currently at capacity. Virginia Beach is on water restrictions because Norfolk cannot supply the increased needs of that area. Low water supply conditions require that four deep ground water wells, built in response to a severe drought in the 1960s, be run at their total 16 million gallon per day (mgd) capacity.⁴ The Act may reduce the amount of water available from these pumps by about 10 mgd.

³ The Commission was not requested to take any formal action on the Association's proposal. However, legislation related to this topic was introduced and passed in the 1994 Session of the General Assembly and is attached as Appendix 1.

⁴ At the time of the Commission's December meeting, it was asserted that the Norfolk reservoir was at 52.4 percent of its capacity. By the January meeting, the reservoir was at just over 60 percent of capacity.

The Ground Water Protection Act of 1992 was enacted in response to the fact that allowable withdrawals of ground water were more than twice available supplies. The Act established a system whereby allowable withdrawals could be established based on historic uses during any consecutive 12-month period during the five years between July 1987 and June 1992. Amounts above this are allowable under certain conditions spelled out in the statute, including the implementation of a conservation and management plan. Norfolk's greatest 12-month average withdrawal was about four and a half mgd during the period provided for in the Act. This five-year period was described as relatively wet as compared to the period during 1981 to 1982 in which there was a severe drought in the area. Little has changed with respect to the sources of water since that drought even though 125,000 more people have moved into the area.

Mr. Guy asserted that the intent of the Act was to protect existing uses but since a wet period was used for that determination and because Southeastern Virginia relies heavily on ground water to meet its needs, it has unintended consequences for the area. It was suggested that the 12-year period between 1980 and 1992 would better represent the actual usage by the area and that the Act should be amended to that effect for the ground water management areas in Southeastern Virginia. The Cities of Chesapeake, Portsmouth and Virginia Beach added their support for this proposal.

A number of concerns and questions were raised by members of the Commission, including (i) would this negatively impact other areas utilizing the same aquifer, (ii) shouldn't the process already available in the Act to obtain increased withdrawals above those explicitly provided for be allowed to proceed, (iii) what will the impact of not allowing the increase be on the operating permit issued by the Health Department, (iv) is there any relation to the Lake Gaston pipeline, and (v) are developed areas giving enough consideration to the needs and desires of other areas.

In response it was noted that (i) it was not clear how this would impact the aquifer, (ii) the area should not have to go through a somewhat discretionary process in order to correct an unintended effect of the Act, (iii) the Health Department would revise the operating permit downward by 10 mgd, and (iv) planning for the Lake Gaston pipeline has been based on the availability of 16 mgd of ground water.

Legislation to expand the window to the period between July 1980 and June 1992 for the determination of historic withdrawals in the Eastern Virginia and Eastern Shore Groundwater Management Areas was endorsed by the Commission. This legislation passed the 1994 Session of the General Assembly.⁵

⁵ The legislation is attached as Appendices 2 and 3.

II. WATER BRIEFINGS

The Commission took major steps in investigating and deliberating the potential for an increased role of the State in water planning, management and development. As part of that effort, the Commission received testimony from a number of experts in the field. The comments of these experts are outlined below.

A. Water Supply and Demand in the Richmond and Hampton Roads Areas

Robert G. Burnley, director of the Water Division of the Department of Environmental Quality outlined the current and future water supply and demand of the Richmond and Hampton Roads areas. Problems, alternatives and options for meeting future needs were also addressed as follows:

1. Richmond Metropolitan Area.

The Richmond Metropolitan Area includes the City of Richmond and the Counties of Henrico, Chesterfield, Hanover, New Kent, Goochland and Powhatan.

The potential total safe yield⁶ from the five surface water sources for the area is 384 million gallons per day (mgd). This figure does not take into account the needed instream reserve for the maintenance of aquatic habitat and other beneficial instream uses. The 1990 capacity of the surface water withdrawal systems was 159 mgd. In addition, ground water withdrawals amounted to six mgd.

The 1990 demand totaled 96 mgd, with a peak demand⁷ of 136 million gallons. A demand of 147 mgd is projected by the year 2030, with a peak demand of 229 million gallons. The Richmond Regional Planning District Commission projects that a peak demand deficit⁸ could occur during the mid-1990s with an average demand deficit⁹ projected by approximately the year 2025.

A number of obstacles exist to increasing the available supply from current sources. Ground water level declines may limit that resource's use, and future determination of instream flow requirements, for values such as habitat and recreation, may limit surface withdrawals. Certain areas in need of more water

⁶ Defined as the minimum withdrawal rate available for a free flowing stream during a day and recurring every 30 years (also referred to as 30 year/one day low flow); for impoundments in conjunction with streams, it is the minimum withdrawal rate available to withstand the worst drought of record in Virginia since 1930 (SWCB and Health Department definition).

⁷ Defined as the highest demand occurring over a given period of time, in this case, a day.

⁸ Defined as the difference between peak demand and available supply (source) or system capacity (infrastructure).

⁹ Defined as the difference between the average demand during a given period of time (in this case, a day) and the available supply or system capacity.

may not have sufficient access. New or expanded treatment capacity and pumping and transmission facilities must be developed.

Increased use of ground water and the development of additional surface water sources are being explored. The City of Richmond is expanding its treatment capacity. Henrico County is pursuing construction of its own water treatment facility and has petitioned the State Water Control Board (SWCB) to designate the James River in the Richmond area a Surface Water Management Area.¹⁰ Such a designation would allow for the regulation, during low-flow periods, of withdrawals through permits and certificates which may include, among others, provisions for limits on withdrawals, time of day or year for withdrawal restrictions and requirements for conservation measures. The City has suggested a river-management plan as an alternative to the Surface Water Management Area designation.

The City of Richmond claims ownership of 417 million gallons of the James River flow based on a 1784 grant from the General Assembly. The actual meaning and intent of this 1784 action by the General Assembly are in dispute.

In 1988, the Richmond Regional Planning District Commission began development of a regional water resources plan. A plan was developed and approved by the member jurisdictions, but disagreement over implementation resulted in no action being taken on the plan. Recently, the Metropolitan Richmond Chamber of Commerce completed a water-supply study aimed at resolving the localities' differences.

2. Hampton Roads - Northern.

The northern portion of the Hampton Roads area includes the Cities of Newport News, Hampton, Poquoson, and Williamsburg and the Counties of York and James City.

A number of reservoirs, the Chickahominy River and ground water are the area's water supply. The surface water safe yield is 66 mgd; 7 mgd can be taken from ground water. Treatment capacity is 61 mgd.

The 1990 demand was 55 mgd. The demand in 2030 is estimated to be 86 mgd. Deficits are projected to occur in the late 1990s.

¹⁰ Va. Code § 62.1-242 et seq. Under this Act the SWCB, on its own initiative or at the request of a locality in an area or of any state agency, can undertake a review of water conditions in the area to determine if such a designation is necessary.

Conservation measures and the conjunctive use¹¹ of surface and ground water are underway to address the pending deficit. Long term solutions to the area's water needs have centered on developing new surface water sources. In 1979, James City County planned to develop the Ware Creek reservoir. EPA vetoed a Corps permit issued for the project and court battles continue over the issue.¹²

Early in 1993, the Cohoke reservoir project in King William County was selected from 31 alternatives by the Regional Raw Water Study Group. State and federal applications have been submitted for the project. James City County has withdrawn from the regional group because it believes that creating a reservoir in Ware Creek is the only timely solution to meet its needs.

3. Hampton Roads - Southern.

The southern portion of Hampton Roads includes the Cities of Norfolk, Virginia Beach, Portsmouth, Chesapeake, Suffolk, and Franklin, and the Counties of Isle of Wight and Southampton.

Reservoirs, the Northwest, Blackwater and Nottoway rivers, and ground water make up the area's water supply. Surface water safe yield is 105 mgd. Another 11 mgd is withdrawn from ground water. Treatment capacity is 99 mgd.

The 1990 demand was 110 mgd, which is about 11 mgd in excess of reliable treatment capacity. The demand in 2030 is projected to be 167 mgd. The area is considered to be on the verge of a safe yield deficit.

Conservation measures, including mandatory restrictions, have resulted in impressive results. Virginia Beach's per capita consumption is about 82 gallons per day compared to 136 gallons per day statewide.

An innovative approach being taken is the ongoing development of an aquifer storage and recovery system to store excess water underground for later use. Portsmouth is using electro dialysis reversal to improve ground water quality.

For nearly 25 years, Virginia Beach has been involved in efforts to construct a pipeline from Lake Gaston to supply 60 mgd to the Cities of Virginia Beach, Portsmouth, Chesapeake, Suffolk, and the Counties of Franklin and Isle of Wight. Numerous legal challenges have been resolved, yet some still remain. At the time

¹¹ Defined as the managed use of surface and ground water resources so that the benefit derived from their combined use is greater than the benefit of using them individually, and the impact on surface and ground water resources occurring with combined use is less than the impact of using them individually.

¹² The federal Fourth Circuit Court of Appeals has upheld EPA's decision to veto the permit. An appeal to the Supreme Court of the United States is planned by the James City County Board of Supervisors.

of the Commission meetings, the Department of Commerce had denied a request by North Carolina for review of the project under the provisions of the Coastal Zone Management Act. However, in December of 1993 the Department of Commerce reversed its position and decided to review the project. The City of Virginia Beach has filed a law suit to overturn that decision.¹³

The Federal Energy Regulatory Commission completed its draft environmental assessment following the Commission's activities in 1993. Public hearings have been held on the draft. A final determination on the environmental assessment has not yet been made.

4. Conclusion.

The situations in the Richmond and Hampton Roads areas highlight the interdependence between areas. Often, one locality acts as a major supplier to a number of others. Because these arrangements are contractual, uncertainty exists for both water suppliers and consumers.

These two areas depend on ground water to some degree. The careful conjunctive use of ground water and surface water is increasingly important. The Ground Water Management Act of 1992 is designed to allow maximum use of the resource while protecting its integrity.

These areas also provide examples of the difficulties in developing new water sources. Significant amounts of time and money have been spent on the Lake Gaston and Ware Creek proposals. The efforts of the Regional Raw Water Study Group and the Richmond Regional Planning Commission illustrate the difficulties in developing regional strategies satisfactory to all localities.

B. Lake Gaston Water Supply Project

A representative from the City of Virginia Beach outlined the status of the Lake Gaston pipeline project as follows:

- The engineering design has been completed.
- Construction plans and specifications that allow the contractors to build the project are complete.

¹³ Oral arguments were heard in the case on April 8, 1994, before the Honorable Rebecca B. Smith of the U.S. District Court in Norfolk. Ten states are backing North Carolina's claim that the Commerce Department has the power to review the project under the federal Coastal Zone Management Act. The Department of Commerce has since found that the project would not have a significant impact under considerations of the Coastal Zone Management Act.

- The right-of-way has been acquired.
- The consent of the localities through which the pipeline will pass has been obtained.
- Financing for the project is in place (a \$200 million bond referendum has been approved by the citizens of Virginia Beach).
- Law suits are still pending, but a number have been resolved in favor of the City.
- The process under the Coastal Zone Management Act is complete.¹⁴
- Approval from the Federal Energy Regulatory Commission is expected in September or October.¹⁵
- Limited construction is underway.
- The water will be received in Norfolk's reservoir. Norfolk will treat and then deliver the water.
- The City of Chesapeake and the Counties of Franklin and Isle of Wight have the opportunity to tap into the pipeline.
- The target date for operation is 1996.

Delegate Lewis Parker noted that Virginia Beach had made agreements with the receiving areas but not with the sending area. That sends a message to the sending area that the receiving area believes it has superior rights. Delegate Parker stressed that he does not want water policy to be used as a growth management tool but that the message Virginia Beach is sending is a bad one. He also noted that even though the intake is in Lake Gaston, the water actually comes from Buggs Island Lake which is used to maintain the water level in Lake Gaston.

C. National Drought Study and Tools for Water Planning

William Werick, study manager of the National Drought Study for the Army Corps of Engineers presented an overview of the national study and, based on his observations in other states, his views of a state's role in water supply.

¹⁴ See footnote number 13 and accompanying text.

¹⁵ This was the assertion made at the July meeting. As noted above the FERC analysis is not yet complete.

In 1989, the U.S. Congress provided funding for a study of drought preparedness and planning. Twenty-nine areas applied to the Corps to be part of the study; four were selected, including the James River basin. In studying drought preparedness, it was found that paper plans did not work when it came time to implement them in a real situation. This is something the Corps has sought to correct.

The Corps has taken several steps including the development of a planning mechanism, the creation of a National Drought Atlas (outlines the frequency and severity of droughts and wet periods), and the development and use of computer technology to compare one drought scenario to another.

Mr. Werick noted that water flows in basins, surface water flows into ground water and ground water flows back to surface water. He also noted that this is not the way a river basin is divided by political subdivisions or surface and ground water quality and quantity responsibilities are divided among different agencies. These conflicts raise issues over the role of the state in reunifying these responsibilities.

Based on information from other states, he made the following observations:

- The state water policy should not dictate to local governments how they should manage their water because better solutions are inevitably found at the local level.
- The state should provide a set of consistent planning principles for water allocation decisions.
- The state can act as liaison with a broader base of experience found nationally.
- The state can provide funding for research.

Robin Williams, also of the Corps, demonstrated a computer model that graphically displays the impact on water availability of different drought conditions and of the responses that are taken. The model includes information on inflows and water usage and takes into consideration such factors as evaporation. Projected future demands can be entered into the system as well. By changing the inputs to the system, such as the amount and location of rainfall, the level and location of water can be identified. The relationship of one reservoir to another can be shown, along with the levels in various bodies of water. Different responses to water levels, such as supplementing water in one area with water from another, can be introduced to the model and the effect seen. This model could aid in reducing factual disputes.

D. Hampton Roads Planning District Commission Water Supply Position Statement

John M. Carlock, director of physical and environmental planning for the Hampton Roads Planning District Commission (HRPDC), presented a local perspective on water resource management issues. The Hampton Roads area is vulnerable to drought conditions because the region's reservoirs have relatively small tributary watersheds and the area's ground water is susceptible to saltwater intrusion.

1. Historical Background.

Water supply planning has been an ongoing effort in the Hampton Roads area for decades. Water-supply plans and technical studies have been conducted by the HRPDC, the Southeastern Public Service Authority, the Department of Environmental Quality (DEQ), the Corps and many other local, regional, state and federal agencies. Between 1965 and 1981, more than 40 studies of the region's water resources were completed. Many more locality-specific water-supply plans and studies were also undertaken. Since 1981, the number of such studies has grown dramatically. The latest count of water-resource studies completed in the last 20 years for the Hampton Roads region exceeds 100.

The following three major water-supply initiatives are presently underway:

- City of Virginia Beach - Lake Gaston Project
- James City and New Kent Counties - Ware Creek Project
- Regional Raw Water Supply Study Group - Regional Water Supply Project for the Peninsula

Efforts to optimize existing water supply systems through improved treatment, transmission and distribution are also underway.

Water-supply projects involving development and protection of the region's ground water supply are ongoing in most of the region's localities. This includes the continued study of the resource and the development of a ground water impact mitigation program.

Over the past fifteen years, the region's localities have expended more than \$397 million on major water supply related projects and activities. The expenses are:

- New Source Development \$ 106,437,000
- System Optimization 167,220,000
- Safe Drinking Water Act 112,511,000
- Clean Water Act 10,836,000
- Ground Water 620,000

The region's four jurisdictions expect to spend an additional \$600 million by the year 2000. These figures do not include the cost of system expansion to serve existing and future residents or the cost of system operation and maintenance. The expenditures by private developers to provide service to new developments and by individual residents to connect to the public system are also not included.

Each locality is pursuing and requiring conservation by residents and businesses. A few of the numerous efforts include:

- Replacing declining block rate schedules with uniform rates.
- Providing a rebate program that pays customers to replace toilets with "ultra-low flow" toilets.
- Maintaining a comprehensive leak detection program.
- Reducing in-treatment plant water loss and increasing the recycling of treatment plant waste water.
- Adopting building codes which require the use of water-conserving plumbing fixtures.
- Encouraging the use of vegetation and water-wise landscaping.

These efforts have greatly reduced water consumption throughout the region. For example, the daily per capita consumption in the City of Virginia Beach has fallen from 101 gallons in 1976 to 87 gallons in 1991. This compares to a national daily consumption of 184 gallons and 151 gallons for the State as a whole. Further reductions in the City's consumption are expected due to modification of its mandatory conservation program.

2. Current intergovernmental water supply responsibilities.

The federal government, primarily through the Army Corps of Engineers and the USEPA, is charged with permitting facilities affecting waters of the United States and with assuring that water supply purveyors provide safe drinking water. The state has parallel responsibilities carried out by DEQ and the Department of Health. Historically, local governments have been charged by enabling legislation to provide a safe drinking water supply to their citizens.

The ability of local governments to carry out these responsibilities is constrained by state and federal regulation. They are further constrained because many state and federal programs are not integrated and often work at cross purposes. In some cases, water supply projects may be caught between two or more state or federal regulatory programs that aim to achieve competing or conflicting objectives.

The HRPDC and other regional agencies provide local governments with technical support, cooperative planning efforts and opportunities to develop a consensus on water supply issues.

Water supply in the region is characterized by a number of hybrids which do not fit into traditional government levels. In a number of instances, localities have developed contractual relationships governing the provision of a water supply. In general, water supply systems are physically interconnected enabling them to function regionally.

3. Philosophical statement on governmental roles.

In examining the proper roles of the various levels of government, it is important to remember that state and local governments and regional agencies have distinct and shared responsibilities. Provision of a safe water supply to all citizens of the Commonwealth is vital to the long-term economic well-being of the State and its citizens. Provision of a water supply in an environmentally sound, cost-effective manner, must be accomplished through a partnership between the state and local governments.

Local governments are responsible for providing a safe, reliable water supply to their citizens. They are responsible to their citizens and to the larger public trust for meeting current and future water supply needs. These responsibilities can be met individually or regionally through inter-jurisdictional contracts or other regional arrangements.

State government must protect the quality and quantity of its surface and ground water and related resources. It must also ensure that sufficient amounts of the state's waters are available when and where needed to guarantee the health

and economic vitality of its political subdivisions and their citizens. The State should endorse needed local or regional projects, which have been determined to be both practical and least damaging to the environment. Once endorsing a project, the State should actively join the localities in pursuing state and federal permits and in reaching settlement of interstate and inter-governmental disputes, preferably outside of the court system. The State should plan for and help preserve water supply development alternatives to ensure that future water needs are met.

4. Recommendations on state water policy

The HRPDC made the following specific recommendations for a new or expanded role for the State in water supply:

- Integrate the water supply planning and regulation responsibilities of the Departments of Environmental Quality and Health.
- Assure that the "local veto" is not misused by helping to facilitate consensus on water supply proposals between source communities and water supply purveyors.
- Provide funding for technical studies of state water resources.
- Provide the necessary technical and political support for local water supply development projects when interstate water resource development is involved.
- Assure that all feasible alternatives to providing water supplies are examined from an environmental, economic and social perspective. However, the state must be willing to concur, at some point, that sufficient study has been completed.
- Do not use water supply control as a state growth management mechanism.
- Assure that compensation policies for inter-jurisdictional transfers of water reflect the relative contributions of localities to the state treasury and thus the budgets of other localities.
- Allow the development and use of ground water to support the provision of a municipal water supply during periods of drought or other emergency situations.

It was noted that the State should move quickly to rationalize the state role in water supply, especially to ensure that water supply does not become an issue in 1995 when potential decisions on military base closures may occur.

In concluding, Mr. Carlock stated that the Hampton Roads region will continue to make a substantial effort to maximize efficiency and identify appropriate solutions for a regional water supply. This commitment of time, people and money cannot be taken lightly. Both local and state governments have a responsibility to the Commonwealth's citizens and natural resources to ensure that a safe and reliable water supply is provided in an environmentally sound and cost-effective manner. The future economic growth of the state and the protection of the environment depends on crafting a reasonable system for managing water resources. This system must be developed and function as a partnership among state and local governments.

III: WATER POLICY

The Commission requested staff of Legislative Services to provide certain background information and to develop options for and increased role in water resource planning, development and management. Staff provided an overview of water law in Virginia, an outline of potential options and structures for an increased role for the state and finally, based on Commission comments on the options and structure, draft statutory language detailing a range of options. This information was presented, and deliberations conducted, over the course of two meetings and is furnished below.

A. Overview of Virginia Water Law

1. Common law riparian doctrine.

The Virginia courts follow the common law riparian doctrine when determining rights to the use of water flowing through or past one's land. Slightly different rules apply to surface and ground water under this doctrine.

a. Surface water.

The riparian doctrine relates to the use of water by those who own land abutting water bodies such as streams. The Virginia Supreme Court has stated the basic rule as follows: "[a] proprietor may make any reasonable use of water of the stream in connection with his riparian estate and for lawful purposes within the watershed, provided he leaves the current diminished by no more than is reasonable, having regard for the like rights to enjoy the common property by other riparian owners."¹⁶ This creates two general limitations on the use of water. First, the use must be "reasonable." Second, it must be for the "benefit of the riparian land." It is also important to note that the right is shared in common by all of those along the body of water.

¹⁶ Virginia Hot Springs Co. v. Hoover, 143 Va. 460, 467, 130 S.E. 408, 410 (1925).

The reasonable-use limitation allows for the quantitative restriction on use. A factual determination is required in each situation. Factors to consider will be the natural flow of the water course, the use to which the water is put and the impact on the needs of other riparians.

The limitation that the water be used for the benefit of the riparian land creates restrictions on the area to which the water can be transferred. In essence, water is not to be transferred for use off the riparian owner's land. A further limitation is that the land upon which the water is used must be in the same watershed as the water being withdrawn, allowing nonconsumed water to flow back to the stream. Other area restrictions include: (i) the land must be a single tract of land, to which the owner acquired title in one transaction and (ii) even though upstream and downstream parcels are connected by land, it is not permissible to transfer water from the upper property to the downstream property if there is intervening land owned by another.¹⁷ These restrictions are intended to protect the rights of downstream riparian owners.

b. Ground water.

If water flows in an underground stream, it is treated in the same manner as if it were a surface stream. However, if the water is diffuse and considered "percolating ground water," early case law indicates an absolute ownership rule. That is, a landowner can use such water in an unlimited manner with disregard for the effect on others who may draw from the same source. Later cases temper this rule with a type of "reasonable use" consideration. That is, a land owner has the right to make a "reasonable use" of the ground water on his overlying land even though it may have a detrimental effect on others who draw from the same supply. This reasonable use determination is distinguished from that for surface water in that only the use to which the water is put is considered rather than the reasonableness of the impact on other users. Thus if the use serves some purpose, it is likely to be allowable.

c. Public supply of water.

The same principles described above are applied to the public supply of water. These principles were developed in a time when individuals provided much of their own water and have not advanced with the municipal provision of the resource. In theory these principles significantly inhibit the ability of local political subdivisions to meet their citizens' water supply needs.

Two principles of Virginia's riparian common law may be applied to tolerate diversions by local governments, which under a strict application of the above riparian rules, would not be allowed. The first is that in order to challenge a

¹⁷ Town of Gordonsville v. Zinn, 129 Va. 542, 556 (1921).

withdrawal of water, a riparian owner must show that his interest has actually been harmed. Thus, if the withdrawal does not affect a lower riparian's reasonable use, he has no basis to challenge the withdrawal, and the diversion will continue.

A second and related principle is that a riparian owner is entitled to the "natural flow" of a water course. Thus, if there is flow in excess of the natural flow, a diverter of water can assert that the diversion does not affect the rights of lower riparians, and therefore there is no basis for complaint.

While these exceptions appear to provide for the diversion of water for public supply, it is not a secure way of obtaining water for a jurisdiction. The jurisdiction does not have any assurances against those who may divert water upstream or who may increase their use downstream. Localities do have the ability to acquire water through prescription, purchase and condemnation.

In addition to the above caveats, the General Assembly has statutorily impacted the riparian doctrine and provided local governments with the tools to provide water service. These powers are addressed in section A3 of this part which follows.

d. Dispute resolution.

At common law the mechanism for resolving water conflicts is the court system, which can be an uncertain and expensive process. Certainty is not even guaranteed once litigation has ended because water use is only reasonable in light of other uses along the same water course. Thus, if other riparian owners begin to use water or to alter their use, the "reasonableness" of the litigated use may be affected.

2. The Virginia Constitution.

Article XI, Section 1, of the Virginia Constitution reads as follows:

"To the end that the people have clean air, pure water, and the use and enjoyment for recreation of adequate public lands, waters, and other natural resources, it shall be the policy of the Commonwealth to conserve, develop, and utilize its natural resources, its public lands, and its historic sites and buildings. Further, it shall be the Commonwealth's policy to protect its atmosphere, lands and waters from pollution, impairment, or destruction, for the benefit, enjoyment, and general welfare of the people of the Commonwealth." (emphasis added)

The legislative history of this section indicates that this is intended to be a statement of the Commonwealth's role in holding natural resources, including water, in trust for the benefit of the citizens of the Commonwealth. Section 2 of Article XI grants the General Assembly the power to enact legislation to further the purposes of Section 1.

The Virginia Supreme Court has held that Article XI, Section 1, is not "self executing," that is, the agencies of the Commonwealth are not required, without specific mandate, to do more than consider it as a statement of policy, if they wish, when carrying out agency responsibilities.¹⁸ The General Assembly can establish that mandate under Article XI, Section 2.

3. Local governments statutory power to supply water.

The General Assembly has statutorily empowered local governments to develop water supplies and water systems. Authority for counties, cities and towns to provide water services is found in a number of locations in Title 15.1 of the Virginia Code and includes, among others, the power to:

- Establish or acquire, individually or jointly, water supplies within or without their jurisdictions.
- Establish or acquire, individually or jointly, water supply systems within or without their jurisdictions.
- Raise and spend funds for these purposes.
- Set rates and fees.
- Build dams in connection with water supply systems.
- Establish water conservation measures.

The Code provides at least three means to settle potentially conflicting needs of localities. A dispute resolution mechanism, consisting of a three-judge panel, is provided for when a jurisdiction does not consent to another jurisdiction establishing a water supply in its territory.¹⁹ A process is also available to establish a committee with authority to allocate water to a jurisdiction when: (i) the jurisdiction has an emergency water shortage, (ii) all feasible water conservation measures have been taken, (iii) neighboring jurisdictions have water available in excess of reasonable needs, and (iv) interconnections for the transfer of water exist.²⁰ A system for the determination of the price to be paid for the water in these circumstances is also provided.²¹ Title 62.1 contains provisions for the SWCB to recommend plans and hold public hearings in situations where there may be a conflict between an actual or proposed water use which does, or may, result in a conflict between water use functions under the jurisdiction of different state

¹⁸ Robb v Shockoe Slip Foundation, 228 Va. 678, 324 S.E.2d 674 (1985).

¹⁹ Va. Code §§ 15.1-37.1:1 through 15.1-37.1:7.

²⁰ Va. Code § 15.1-37.3:4 A and B.

²¹ Va. Code § 15.1-37.3:4 C.

agencies.²² There is no enforcement mechanism established by this section, making the plans advisory only. In a similar vein, the SWCB has been authorized in the past to develop advisory only water management plans for the major river basins in the state.²³

4. Public trust doctrine.

The public trust doctrine is a concept founded in the principle that the Commonwealth is a steward of the natural resources of the State which are in effect the resources of the citizens of the Commonwealth. The Commonwealth is to act as a trustee of those resources for the benefit of its citizens. Article XI, Section 1, of the Virginia Constitution sets out the premise that the Commonwealth, in exercising its trust responsibilities, is to "conserve, develop and utilize" these resources.

It is important to note that the doctrine may be used as a two-edged sword. That is, on the one hand the State can use it to play a role in the development and allocation of the Commonwealth's water resources. On the other, there is a potential that it could be used by those who believe that the State is not doing enough to protect natural resources.

The existence of the trust has significant implications for an individual's expectations in their "rights" to water. In essence, one's right to water is subject to this trust (as well as the riparian doctrine). If the State, in acting on its trust responsibilities, impacts one's interests, less of a claim can be made for interference with water "rights."

The State currently plays a role in the conservation of water through the protection of water quality. It does not play a major role in the development or utilization of water supplies. Most of its current regulatory activity in water supply development has focused on denial of permits rather than the creation and promotion of particular projects. Provisions of the Surface Water Management Act,²⁴ the Ground Water Management Act²⁵ and the Virginia Water Protection Permit program²⁶ do allow for some role in regulating the utilization of water under certain conditions.

²² Va. Code § 62.1-44.37.

²³ Va. Code § 62.1-44.38.

²⁴ Va. Code § 62.1-242 et seq. This Act is described briefly in II, subdivision A1.

²⁵ Va. Code § 62.1-254 et seq. This Act is described briefly in I, subdivision 2.

²⁶ Va. Code § 62.1-44.15:5. The VWPP constitutes the certification required under § 401 of the federal Clean Water Act (33 U.S.C.A. § 1251 et seq. , at § 1341). Certification by the State of compliance with certain provisions of the CWA including those relating to effluent limitations and standards, water quality standards and state requirements is required of applicants for federal permits to discharge to navigable waters. State requirements for certification may include withdrawal restrictions to protect instream beneficial uses.

Based on the policy statement of Article XI, Section 1, and the power granted the legislature in Article XI, Section 2, it appears that there is a basis for the General Assembly to legislatively assert powers, in addition to those in furtherance of the general health, safety and welfare, over the waters of the Commonwealth so as to protect and foster its quantity, quality and utilization.

B. Options and Structure for an Increased State Role in Water Resources

At the Commission's July meeting, staff of Legislative Services presented an outline of the potential options for the development of an increased state role in water resources. Options covering the areas of planning, development, utilization and incentives were outlined as possible structures from which to develop such a role. The following summarizes that structure. The full outline follows this report as Appendix 4.

1. Planning.

"Planning" is information gathering as to quality, quantity and current and future needs as well as assessment of alternatives and options.

A determination of whether planning is from a state-wide perspective or from a smaller-unit is also involved. In all of the issues involved in planning, there are options ranging from total state control to local autonomy.

2. Development.

"Development" is the physical process by which water is captured and distributed. Long and short range alternatives include conjunctive use, storage, drought preparedness, water levels that trigger conservation, water supplies such as reservoirs, and distribution systems. As with planning, options range from total state control to local autonomy.

3. Utilization.

"Utilization" involves decisions about who gets water, under what circumstances, for what purposes and in what quantities. A key issue is the development of criteria for water transfers. Responsibility for the establishment and implementation of these criteria can rest solely with the state, solely with localities or with a combination of the two.

Other issues in utilization are regulating of the transfer of water and requiring regulation at what level, that is, between basins, between jurisdictions or between some other units of analysis.

Protection of the sending area is also an element of utilization. Considerations include payments, economic development worries, flow reserves and storage development for these areas. The State may establish protective conditions, allow total local control or develop some combination of the two.

An additional element of utilization, dispute resolution, ranges from the development of a special court with exclusive jurisdiction to no state role at all.

4. Incentives.

"Incentives" are the methods by which those who have an interest in water are encouraged to participate in any agenda established for planning, development and utilization. When, and under what conditions, the State should provide incentives is at issue and will in large part depend on the role the State takes in an overall water agenda. Options include financial assistance, involvement in the resolution of interstate conflicts and facilitating relations with federal agencies.

5. Discussion.

The Commission believed that this was a good structure from which to explore potential state programs dealing with water resources. Staff was requested to develop draft statutory language that would expound upon these options for presentation at a future meeting of the Commission.²⁷

In addition, members of the Commission raised the following issues regarding an increased state role in water resources:

- Complete documentation of the location, quantity and availability of the waters of the Commonwealth would allow for better determination of what the real options are.
- What effect will an increased state involvement have on existing and planned inter-jurisdictional agreements and planning?
- The problems with water supply are just beginning, and if action is not taken in the near future, serious problems will occur.
- The state role to date has focused on water quality rather than water supply and development. The state agencies are in the position to deny reservoirs and water supply systems but not to create those systems.
- Who will be responsible for water management?

²⁷ That meeting was held in December of 1993 and is presented in the following section.

- What localities other than the City of Richmond lay claim to surface water grants from the Commonwealth?

C. Draft Statutory Language for Options

Staff of Legislative Services developed a series of statutory proposals for review by the Commission. The statutory proposals were intended to cover the options outlined above and to provide a structure and framework for discussion and future comment. The statutes were presented in four sections as follows: (i) policy/public trust statement, (ii) planning, (iii) interbasin transfers, and (iv) development. The options provide varying degrees of state control and oversight as well as varying concepts for the management of the waters of the State.

Note that, except in the development options, definitions have not been provided. Definitions can have a very significant impact on each option. For example, altering the definitions of such terms as "water transfer," "consumptive use," "basin," and "project" can alter the impact and scope of an option. Several of the options have lists of considerations (such as the policies and principles to be considered in the planning options) which can be added to or deleted from the proposed legislation creating significant changes to the option.

Some of the options contain statutory cross references to statutes in other options. Cross references are marked as follows: to statutes found in the same option with *, to statutes found in the planning options with **, to statutes found in transfer option 3 with °. Cross reference to existing law are not marked.

1. Examples of Policy/Public Trust Statements.

The general concept of the public trust is outlined in section A4 of this part. The following language could be used to express the intent of the General Assembly that it is expanding the activities of the Commonwealth in water development and utilization. The following amended statutes point out that the Commonwealth has both police and trust powers which can be utilized in this regard. Language is also provided to make it clear that the General Assembly is directing the State Water Control Board to execute certain responsibilities in furtherance of the Commonwealth's responsibilities found in Article XI, Section 1, and the powers granted the legislature in Article XI, Section 2, of the Virginia Constitution. Earlier it was noted that the Virginia Supreme Court has stated that Article XI, Section 1, is not self executing.²⁸ This language would make it clear that the General Assembly is having the SWCB "execute" this responsibility.

²⁸ See footnote 18 and accompanying text.

§ 62.1-11. Waters declared natural resource; state regulation and conservation; limitations upon right to use.--A. Such waters are a natural resource which should be regulated by the Commonwealth.

B. The regulation, control, development and use of waters for all purposes beneficial to the public are within the jurisdiction of the Commonwealth which in the exercise of its constitutional public trust responsibilities and its police powers may establish measures to effectuate the proper and comprehensive utilization and protection of such waters.

C. The changing wants and needs of the people of the Commonwealth may require the water resources of the Commonwealth to be put to uses beneficial to the public to the extent of which they are reasonably capable; the waste or unreasonable use or unreasonable method of use of water should be prevented; and the conservation of such water is to be exercised with a view to the welfare of the people of the Commonwealth and their interest in the reasonable and beneficial use thereof.

D. The public welfare and interest of the people of the Commonwealth require the proper development, wise use, conservation and protection of water resources together with protection of land resources, as affected thereby.

E. The right to the use of water or to the flow of water in or from any natural stream, lake or other watercourse in this Commonwealth is and shall be limited to such water as may reasonably be required for the beneficial use of the public to be served; such right shall not extend to the waste or unreasonable use or unreasonable method of use of such water.

F. The quality of state waters is affected by the quantity of water and it is the intent of the Commonwealth, to the extent practicable, to maintain flow conditions to protect instream beneficial uses and public water supplies for human consumption.

§ 62.1-44.2. Short title; purpose.--The short title of this chapter is State Water Control Law. It is the policy of the Commonwealth of Virginia and the purpose of this law to: (1) protect existing high quality state waters and restore all other state waters to such condition of quality that any such waters will permit all reasonable public uses and will support the propagation and growth of all aquatic life, including game fish, which might reasonably be expected to inhabit them, (2) safeguard the clean waters of the Commonwealth from pollution, (3) prevent any increase in pollution, (4) reduce existing pollution, and (5) promote water resource conservation, management and distribution, and encourage water consumption reduction in order to provide for the health, safety, and welfare of the present and future citizens of the Commonwealth, and (6) execute the Commonwealth's constitutional public trust responsibilities to conserve, develop and utilize the waters of the Commonwealth.

§ 62.1- . Findings and purpose.-- The General Assembly hereby determines and finds that in order to fulfill its responsibilities to assure that the water

resources of the Commonwealth, which are held in common by all of its citizens, are conserved, developed and utilized in the best interest of the public for beneficial purposes, and to ensure the public welfare, safety and health, it is essential that the Commonwealth take additional measures in this regard. To that end the General Assembly through this act directs the State Water Control Board to execute this responsibility through the planning, allocation, development, conservation and enforcement provisions found herein.

2. Water Planning.

Three structures are provided for the development of comprehensive water plans. All contemplate a shared role between local entities and the state in developing water plans following certain guiding principles and policies. The options utilize either local governments, planning district commissions (PDCs) or newly created basin commissions as the local entity. An attempt is made to use or develop entities that would be based on hydrological boundaries. These options meet that with varying degrees of success in this regard. Appendix 5 lists the jurisdictions found within each PDC. Appendix 6 is a state map showing the major and minor river basins and current planning areas. Appendix 7 presents Virginia counties and cities by major river basin, subbasin and PDC.

In the past the General Assembly has authorized the SWCB to develop plans which were only advisory for nine river basins.²⁹ The first five "principles and policies" found in § 62.1-44.36:2 of the planning options are from current § 62.1-44.38.

A chart comparing the major provisions of the planning options is attached as Appendix 8.

Planning Option 1: Subbasin Commissions

§ 62.1-44.36:1. Board responsible for water resources planning.--Being cognizant of the crucial importance to the health and welfare of the people of Virginia and of the need of a water supply to assure further industrial growth and economic prosperity for the Commonwealth, and recognizing the necessity for continuous cooperative planning and effective state level guidance in the use and development of water resources, the Board shall be responsible for planning the development, conservation, management, and utilization of Virginia's water resources.

²⁹ Va. Code § 62.1-44.38.

§ 62.1-44.36:2. Development of plan; formulation of policies.-- A. The Board shall develop a state water plan that provides guidance for the orderly and coordinated management, conservation, development and utilization of the water resources of the Commonwealth.

B. In formulating the state water plan, consideration shall be given, among other things, to the following principles and policies:

1. Existing water rights shall be protected and preserved, subject to the principle that all of the state waters belong to the public for use by the people for beneficial purposes without waste.

2. Adequate and safe supplies shall be preserved and protected for human consumption, while conserving maximum supplies for other beneficial uses. When proposed uses of water are in conflict or when available supplies of water are insufficient for all who desire to use them, preference shall be given to human consumption over all other uses.

3. It is in the public interest to integrate and coordinate uses of water and to augment existing supplies for all beneficial purposes to achieve maximum economic development for the Commonwealth. Innovative alternatives for obtaining and developing additional supplies (e.g., desalinization, recycling and reuse) shall be encouraged.

4. Stream flows sufficient to support beneficial in-stream uses shall be protected.

5. The hydrologic boundaries of water resources shall be favored, whenever possible, for planning and project development.

6. The interdependency of water users which are within the same hydrologic unit, and the need to establish cooperative planning, management and protection of the common water resources shall be recognized.

7. Multi-purpose impoundment structures (e.g., water supply storage, flood control and recreation) shall be favored over single-purpose structures; upstream impoundments are to be favored over downstream impoundments.

8. The fishery resource of the Commonwealth is an important economic and recreational asset. In planning and constructing impoundment structures and other artificial obstructions, due regard shall be given to means and methods for protection of the fishery resource.

9. Cooperative programs between the state, federal, and local governments shall be encouraged; however, the principle of the sovereignty of this Commonwealth over all the waters within the Commonwealth shall be protected and preserved.

10. The natural interrelationship of surface and ground water shall be recognized. Evaluation of the hydrological role of ground water shall be made so that surface and ground water can be managed conjunctively.

11. Water conservation measures to prevent and minimize waste and promote wise use shall be utilized. Both supply management and demand techniques and programs such as leak detection, metering, installation of water-saving plumbing, and educational efforts shall be employed.

12. Appropriate management, planning and response strategies shall be utilized to reduce the impact of drought and other water shortages. Approaches which promote coordinated water distribution and emergency allocation by water users and suppliers shall be preferred.³⁰

§ 62.1-44.36:3. Development of a state water plan; components.-A. The state water plan shall consist of the following components:

1. The principles and policies described in § 62.1-44.36:2.*

2. Basin plans for each of the nine river basins as delineated by the U.S. Geological Survey and referred to as the Potomac-Shenandoah River Basin, the James River Basin, the Rappahannock River Basin, the Roanoke River Basin, the Chowan and Dismal Swamp River Basin, the Tennessee and Big Sandy River Basin, the Small Basins and Chesapeake Bay, the York River Basin, and the New River Basin. The basin plans developed by the Board shall (i) estimate current water withdrawals and use for agriculture, industry, domestic use, and other significant categories of water users, (ii) project water withdrawals and use by agriculture, industry, domestic use, and other significant categories of water users, (iii) evaluate, to the extent practicable, the ability of existing subsurface and surface waters to meet current and future water uses and identify those subbasins which may face a deficiency in water resources during the planning period, (iv) determine the suitability of potential sites as facilities for the storage of water, (v) delineate the subbasins within each basin using natural hydrologic boundaries, and (vi) establish a timetable for the submission of subbasin plans based on the projected water deficiencies in each subbasin. From time to time and at least every five years, the Board shall review each basin plan and shall either (i) prepare any amendments necessary to update the plan or (ii) issue a determination that no amendments are necessary, and the reasons supporting such a determination. The formulation and subsequent revisions of, or amendments to, the basin plan shall be subject to the provisions of the Administrative Process Act (§ 9-6.14:1 et seq.).

3. Subbasin plans submitted by subbasin commissions and approved by the Board.

B. The state water plan shall reflect a planning period of not less than thirty years.

§ 62.1-44.36:4. Subbasin notifications.--The Board shall provide notice to each water user withdrawing surface or subsurface water in the subbasin who report usage under § 62.1-44.38* of (i) the users presence in a particular subbasin and (ii) the requirement that the subbasin commission submit a subbasin plan.

³⁰ At the December meeting it was suggested that a 13th principle be added to the effect that water is a commodity and should be treated as such.

§ 62.1-44.36:5. Subbasin commissions; composition.--A. Each subbasin commission shall be composed of the following members to be appointed by the Governor:

1. One member shall represent each city and county within the subbasin; however, in no instance shall there be fewer than four members representing cities and counties;

2. One member shall represent agricultural interests;

3. Two members shall be selected from among the industrial, manufacturing, mining and electrical power generation sectors; and

4. One member shall represent environmental interests.

B. Members shall serve for terms of four years and may succeed themselves, except that appointments to fill vacancies shall be for the unexpired terms. Members shall be residents of the particular subbasin.

C. Members shall not receive per diem, compensation, or travel expenses for their service on the subbasin commission.

D. The subbasin commission shall elect a chairman and vice chairman annually from among its members. A majority of the members of the subbasin commission shall constitute a quorum.

E. Staff to the subbasin commission shall be provided by those entities represented on the subbasin commission, and, upon request, by the State Water Control Board. The State Water Control Board shall, upon request, provide technical assistance to the subbasin commission.

§ 62.1-44.36:6. Subbasin commission responsible for plan development; content; submission.--A. Each subbasin commission shall be responsible for developing a plan for managing demand and providing for an adequate supply of water in the particular subbasin for a period of not less than thirty years. The subbasin plan shall be consistent with the policies and principles of § 62.1-44.36:2* and the Board's basin plan.

B. The subbasin plan shall include (i) a description of the strategies and specific projects to be implemented, (ii) the documentation establishing the appropriateness of the chosen strategies and projects, (iii) a timetable for implementation of the various strategies and related projects, and (iv) a description of the procedures used in developing the plan and efforts made to include the public's participation in the development of the plan.

C. Upon approval of the subbasin plan by three-fourths of the subbasin commission membership, the plan shall be submitted to the Board for its review and approval.

§ 62.1-44.36:7. Public participation in formulating subbasin plan; public hearing.--A. In formulating a subbasin plan, each subbasin commission shall afford interested persons an opportunity to submit data, views and arguments, either orally or in writing.

B. A subbasin commission shall adopt or amend a subbasin plan only after holding at least one public hearing within the subbasin area. At least sixty days in advance of the hearing on the subbasin plan, a notice shall be published in a newspaper of general circulation within the subbasin area, informing the public of the date, time and place of the hearing. The notice shall also include (i) a brief summary of the proposed plan and (ii) the information on how a copy of the plan may be obtained.

C. Prior to the hearing on the subbasin plan, copies of the plan shall be available from the subbasin commission. The subbasin commission shall forward a copy of the proposed plan to each city or county within the subbasin area.

D. A public comment period for the subbasin plan shall extend from the date of publication of the notice of the public hearing until thirty days after the holding of the final public hearing.

E. All notices, written submittals, and summaries of the subbasin commission's proceedings shall be matters of public record and made available for public inspection.

§ 62.1-44.36:8. Approval of subbasin plan.--A. The Board shall approve a subbasin plan if it is consistent with the policies and principles of § 62.1-44.36:2* and the Board's applicable basin plan. The Board's review of a subbasin plan shall be conducted pursuant to Article 3 (§ 9-6.14:11 et. seq.) of the Administrative Process Act.

B. If the Board, as part of its periodic review of the basin plans, finds that there is a need to revise a subbasin plan, it shall notify the subbasin commission of this fact, and shall establish a deadline for submission of the revised subbasin plan. The subbasin commission, on its own motion, may revise its plan from time-to-time due to changing circumstances, and submit the plan to the Board for approval.

C. The Board shall either approve or reject a subbasin plan or any revision within nine months of its date of submission. If a subbasin plan or a revised plan is rejected, the Board shall request that the plan be amended and resubmitted within a period of time to be established by the Board.

D. The decision of the Board may be appealed to the three-judge panel established under § 62.1-44.43:5° by (i) a city or county within the subbasin region, (ii) any person who resides in subbasin area, or (iii) any person who participated, in person or by submittal of written comments, in the Board's public hearing process.

§ 62.1-44.36:10. Failure to submit subbasin plan.--A. A subbasin plan or a revision to the subbasin plan requested by the Board shall be submitted as required by the timetable established in the basin plan. However, a subbasin commission may be granted an extension in its date of submission, if the Board finds that the subbasin commission is making a good faith effort to complete the plan.

B. If the time period for completion of the plan has elapsed, the Board shall, in the absence of action by the subbasin commission, develop the subbasin plan in

accordance with the requirements for developing a subbasin plan contained in subsection B of § 62.1-44.36:6.*

§ 62.1-44.36:11. Consultation with other agencies or persons.--During the process of formulating or amending the state water plan, the Board shall consult with, and carefully evaluate, the recommendations of federal, state and local agencies and other interested persons. The Board shall give due deference to the recommendations of the Health Department with respect to the quality and quantity of drinking water. All agencies of the Commonwealth shall cooperate with the Board, and, upon request, provide assistance in carrying out the provisions of this chapter.

~~§ 62.1-44.38. Registration of certain data by water users.--A. The Board shall prepare plans and programs for the management of the water resources of this Commonwealth in such a manner as to encourage, promote and secure the maximum beneficial use and control thereof. These plans and programs shall be prepared for each major river basin of this Commonwealth, and appropriate subbasins therein, including specifically the Potomac-Shenandoah River Basin, the Rappahannock River Basin, the York River Basin, the James River Basin, the Chowan River Basin, the Roanoke River Basin, the New River Basin, the Tennessee-Big Sandy River Basin, and for those areas in the Tidewater and elsewhere in the Commonwealth not within these major river basins. Reports for each basin shall be published by the Board.~~

~~B. In preparing river basin plan and program reports enumerated in subsection A of this section, the Board shall (i) estimate current water withdrawals and use for agriculture, industry, domestic use, and other significant categories of water users; (ii) project water withdrawals and use by agriculture, industry, domestic water use, and other significant categories of water users; (iii) estimate, for each major river and stream, the minimum instream flows necessary during drought conditions to maintain water quality and avoid permanent damage to aquatic life in streams, bays, and estuaries; (iv) evaluate, to the extent practicable, the ability of existing subsurface and surface waters to meet current and future water uses, including minimum instream flows, during drought conditions; (v) evaluate, in cooperation with the Virginia Department of Health and local water supply managers, the current and future capability of public water systems to provide adequate quantity and quality of water; (vi) identify water management problems and alternative water management plans to address such problems; and (vii) evaluate hydrologic, environmental, economic, social, legal, jurisdictional, and other aspects of each alternative management strategy identified.~~

~~C. The Board may, by regulation, require each water user withdrawing surface or subsurface water or both during each year to register, by a date to be established by the Board, water withdrawal and use data for the previous year including the estimated average daily withdrawal, maximum daily withdrawal, sources of water withdrawn, and volume of wastewater discharge, provided that the withdrawal~~

exceeds one million gallons in any single month for use for crop irrigation, or that the daily average during any single month exceeds 10,000 gallons per day for all other users.

~~D. The Board shall establish advisory committees to assist it in the formulation of such plans or programs and in formulating recommendations called for in subsection E of this section. In this connection, the Board may include committee membership for branches or agencies of the federal government, branches or agencies of the Commonwealth, branches or agencies of the government of any state in a river basin located within that state and Virginia, the political subdivisions of the Commonwealth, and all persons and corporations interested in or directly affected by any proposed or existing plan or program.~~

~~E. The Board shall prepare plans or programs and shall include in reports prepared under subsection A of this section recommended actions to be considered by the General Assembly, the agencies of the Commonwealth and local political subdivisions, the agencies of the federal government, or any other persons that the Board may deem necessary or desirable for the accomplishment of plans or programs prepared under subsection B of this section.~~

~~F. In addition to the preparation of plans called for in subsection A of this section, the Board, upon written request of a political subdivision of the Commonwealth, shall provide water supply planning assistance to such political subdivision, to include assistance in preparing drought management strategies, water conservation programs, evaluation of alternative water sources, state enabling legislation to facilitate a specific situation, applications for federal grants or permits, or other such planning activities to facilitate intergovernmental cooperation and coordination.~~

Planning Option 2: Planning District Commissions

§ 62.1-44.36:1. Board responsible for water resources planning.--Being cognizant of the crucial importance to the health and welfare of the people of Virginia and of the need of a water supply to assure further industrial growth and economic prosperity for the Commonwealth, and recognizing the necessity for continuous cooperative planning and effective state level guidance in the use and development of water resources, the Board shall be responsible for planning the development, conservation, management, and utilization of Virginia's water resources.

§ 62.1-44.36:2. Development of plan; formulation of policies.-- A. The Board shall develop a state water plan that provides guidance for the orderly and coordinated management, conservation, development and utilization of the water resources of the Commonwealth.

B. In formulating the state water plan, consideration shall be given, among other things, to the following principles and policies:

1. Existing water rights shall be protected and preserved, subject to the principle that all of the state waters belong to the public for use by the people for beneficial purposes without waste.

2. Adequate and safe supplies shall be preserved and protected for human consumption, while conserving maximum supplies for other beneficial uses. When proposed uses of water are in conflict or when available supplies of water are insufficient for all who desire to use them, preference shall be given to human consumption over all other uses.

3. It is in the public interest to integrate and coordinate uses of water and to augment existing supplies for all beneficial purposes to achieve maximum economic development for the Commonwealth. Innovative alternatives for obtaining and developing additional supplies (e.g., desalinization, recycling and reuse) shall be encouraged.

4. Stream flows sufficient to support beneficial in-stream uses shall be protected.

5. The hydrologic boundaries of water resources shall be favored, whenever possible, for planning and project development.

6. The interdependency of water users which are within the same hydrologic unit, and the need to establish cooperative planning, management and protection of the common water resources shall be recognized.

7. Multi-purpose impoundment structures (e.g., water supply storage, flood control and recreation) shall be favored over single-purpose structures; upstream impoundments are to be favored over downstream impoundments.

8. The fishery resource of the Commonwealth is an important economic and recreational asset. In planning and constructing impoundment structures and other artificial obstructions, due regard shall be given to means and methods for protection of the fishery resource.

9. Cooperative programs between the state, federal, and local governments shall be encouraged; however, the principle of the sovereignty of this Commonwealth over all the waters within the Commonwealth shall be protected and preserved.

10. The natural interrelationship of surface and ground water shall be recognized. Evaluation of the hydrological role of ground water shall be made so that surface and ground water can be managed conjunctively.

11. Water conservation measures to prevent and minimize waste and promote wise use shall be utilized. Both supply management and demand techniques and programs such as leak detection, metering, installation of water-saving plumbing, and educational efforts shall be employed.

12. Appropriate management, planning and response strategies shall be utilized to reduce the impact of drought and other water shortages. Approaches which promote coordinated water distribution and emergency allocation by water users and suppliers shall be preferred.

§ 62.1-44.36:3. Development of a state water plan; components.--A. The state water plan shall consist of the following components:

1. The principles and policies described in § 62.1-44.36:2.*

2. Basin plans for each of the nine river basins as delineated by the U.S. Geological Survey and referred to as the Potomac-Shenandoah River Basin, the James River Basin, the Rappahannock River Basin, the Roanoke River Basin, the Chowan and Dismal Swamp River Basin, the Tennessee and Big Sandy River Basin, the Small Basins and Chesapeake Bay River Basin, the York River Basin, and the New River Basin. The basin plans developed by the Board shall (i) estimate current water withdrawals and use for agriculture, industry, domestic use, and other significant categories of water users, (ii) project water withdrawals and use by agriculture, industry, domestic use, and other significant categories of water users, (iii) evaluate, to the extent practicable, the ability of existing subsurface and surface waters to meet current and future water uses and identify those areas which may face a deficiency in water resources during the planning period, (iv) determine the suitability of potential sites as facilities for the storage of water, and (v) establish a timetable for the submission of Planning District Commission (PDC) plans based on the projected water deficiencies in each PDC. From time to time and at least every five years, the Board shall review each basin plan and shall either (i) prepare any amendments necessary to update the plan or (ii) issue a determination that no amendments are necessary, and the reasons supporting such a determination. The formulation and subsequent revisions of, or amendments to, the basin plan shall be subject to the provisions of the Administrative Process Act (§ 9-6.14:1 et. seq.).

3. The district water plans submitted by PDCs and approved by the Board.

B. The state water plan shall reflect a planning period of not less than 30 years.

§ 62.1-44.36:4. Planning district commission notification.--The Board shall provide notice to (i) the PDC, (ii) each local government within the PDC, and (iii) each water user withdrawing surface or subsurface water in the planning district who report usage under § 62.1-44.38* of the requirement that the PDC submit a district water plan.

§ 62.1-44.36:5. Planning district commission responsible for plan development; content; submission.-- Each planning district commission shall be responsible for the developing a planning district water plan for managing demand and providing for an adequate supply of water in the particular planning district for a period of not less than thirty years. The planning district water plan shall be consistent with the policies and principles of § 62.1-44.36:2* and the Board's basin plan.

B. The plan shall include (i) a description of the strategies and specific projects to be implemented, (ii) documentation establishing the appropriateness of the chosen strategies and related projects, (iii) a timetable for implementation of the

various strategies and projects, and (iv) a description of the procedures used in developing the plan and efforts made to include the public's participation in the development of the plan.

C. Upon approval of the water plan by the PDC, the plan shall be submitted to the Board for its review and approval.

§ 62.1-44.36:6. Public participation in formulating PDC water plan; public hearing.--A. In formulating a water plan each PDC shall afford interested persons an opportunity to submit data, views and arguments, either orally or in writing.

B. A PDC shall adopt or amend its water plan in accordance with the procedures established in § 15.1-431.

C. All notices, written submittals, and summaries of the PDC's proceedings related to development of a water plan shall be matters of public record and made available for public inspection.

§ 62.1-44.36:7. Approval of PDC water plan.--A. The Board shall approve the PDC's water plan if it is consistent with the policies and principles of § 62.1-44.36:2* and the Board's applicable basin plan or plans. The Board's review of a PDC water plan shall be conducted pursuant to Article 3 (§ 9-6.14:11 et. seq.) of the Administrative Process Act.

B. If the Board, as part of its periodic review of the basin plans, finds that there is a need to revise a PDC plan, it shall notify the PDC of this fact, and shall establish a deadline for submission of the revised PDC plan. The PDC, on its own motion, may revise its plan from time-to-time due to changing circumstances, and submit the revised plan to the Board for approval.

C. The Board shall either approve or reject the PDC plan or revision of a PDC plan within nine months of its date of submission. If a PDC plan is rejected, the Board shall request that the plan be amended and resubmitted within a period of time to be established by the Board.

D. The decision of the Board may be appealed to the three-judge panel established under § 62.1-44.43:5° by (i) the PDC, (ii) a city or county within the planning district, (iii) those parties whose water use in the planning district requires them to report their withdrawals pursuant to § 62.1-44.38*, or (iv) any person who participated, in person or by submittal of written comments, in the Board's public hearing process.

§ 62.1-44.36:8. Failure to submit PDC plan.--A. The PDC shall submit its plan as required by the timetable established in the basin plan. However, a PDC may be granted an extension in its date of submission, if the Board finds that the PDC is making a good faith effort to complete the plan.

B. If the time period for completion of the plan has elapsed, the Board shall, in the absence of action by the PDC, develop the PDC's water plan in accordance with

the requirements for developing a water plan contained in subsection B of § 62.1-44.36:5*.

§ 62.1-44.36:9. Consultation with other agencies or persons.--During the process of formulating or amending the state water plan, the Board shall consult with, and carefully evaluate, the recommendations of federal, state and local agencies and other interested persons. The Board shall give due deference to the recommendations of the Health Department with respect to the quality and quantity of drinking water. All agencies of the Commonwealth shall cooperate with the Board, and, upon request, provide assistance in carrying out the provisions of this chapter.

§ 62.1-44.36:10. Board to provide assistance.--The State Water Control Board shall, upon the request of a PDC, provide technical assistance in the formulation of the PDC's water plan.

~~§ 62.1-44.38. Registration of certain data by water users.--A. The Board shall prepare plans and programs for the management of the water resources of this Commonwealth in such a manner as to encourage, promote and secure the maximum beneficial use and control thereof. These plans and programs shall be prepared for each major river basin of this Commonwealth, and appropriate subbasins therein, including specifically the Potomac-Shenandoah River Basin, the Rappahannock River Basin, the York River Basin, the James River Basin, the Chowan River Basin, the Roanoke River Basin, the New River Basin, the Tennessee-Big Sandy River Basin, and for those areas in the Tidewater and elsewhere in the Commonwealth not within these major river basins. Reports for each basin shall be published by the Board.~~

~~B. In preparing river basin plan and program reports enumerated in subsection A of this section, the Board shall (i) estimate current water withdrawals and use for agriculture, industry, domestic use, and other significant categories of water users; (ii) project water withdrawals and use by agriculture, industry, domestic water use, and other significant categories of water users; (iii) estimate, for each major river and stream, the minimum instream flows necessary during drought conditions to maintain water quality and avoid permanent damage to aquatic life in streams, bays, and estuaries; (iv) evaluate, to the extent practicable, the ability of existing subsurface and surface waters to meet current and future water uses, including minimum instream flows, during drought conditions; (v) evaluate, in cooperation with the Virginia Department of Health and local water supply managers, the current and future capability of public water systems to provide adequate quantity and quality of water; (vi) identify water management problems and alternative water management plans to address such problems; and (vii) evaluate hydrologic, environmental, economic, social, legal, jurisdictional, and other aspects of each alternative management strategy identified.~~

~~C.—The Board may, by regulation, require each water user withdrawing surface or subsurface water or both during each year to register, by a date to be established by the Board, water withdrawal and use data for the previous year including the estimated average daily withdrawal, maximum daily withdrawal, sources of water withdrawn, and volume of wastewater discharge, provided that the withdrawal exceeds one million gallons in any single month for use for crop irrigation, or that the daily average during any single month exceeds 10,000 gallons per day for all other users.~~

~~D. The Board shall establish advisory committees to assist it in the formulation of such plans or programs and in formulating recommendations called for in subsection E of this section. In this connection, the Board may include committee membership for branches or agencies of the federal government, branches or agencies of the Commonwealth, branches or agencies of the government of any state in a river basin located within that state and Virginia, the political subdivisions of the Commonwealth, and all persons and corporations interested in or directly affected by any proposed or existing plan or program.~~

~~E. The Board shall prepare plans or programs and shall include in reports prepared under subsection A of this section recommended actions to be considered by the General Assembly, the agencies of the Commonwealth and local political subdivisions, the agencies of the federal government, or any other persons that the Board may deem necessary or desirable for the accomplishment of plans or programs prepared under subsection B of this section.~~

~~F. In addition to the preparation of plans called for in subsection A of this section, the Board, upon written request of a political subdivision of the Commonwealth, shall provide water supply planning assistance to such political subdivision, to include assistance in preparing drought management strategies, water conservation programs, evaluation of alternative water sources, state enabling legislation to facilitate a specific situation, applications for federal grants or permits, or other such planning activities to facilitate intergovernmental cooperation and coordination.~~

Planning Option 3: Local Government

§ 62.1-44.36:1. Board responsible for water resources planning.--Being cognizant of the crucial importance to the health and welfare of the people of Virginia and of the need of a water supply to assure further industrial growth and economic prosperity for the Commonwealth, and recognizing the necessity for continuous cooperative planning and effective state level guidance in the use and development of water resources, the Board shall be responsible for planning the development, conservation, management, and utilization of Virginia's water resources.

§ 62.1-44.36:2. Development of plan; formulation of policies.-- A. The Board shall develop a state water plan that provides guidance for the orderly and coordinated management, conservation, development and utilization of the water resources of the Commonwealth.

B. In formulating the state water plan, consideration shall be given, among other things, to the following principles and policies:

1. Existing water rights shall be protected and preserved, subject to the principle that all of the state waters belong to the public for use by the people for beneficial purposes without waste.

2. Adequate and safe supplies shall be preserved and protected for human consumption, while conserving maximum supplies for other beneficial uses. When proposed uses of water are in conflict or when available supplies of water are insufficient for all who desire to use them, preference shall be given to human consumption over all other uses.

3. It is in the public interest to integrate and coordinate uses of water and to augment existing supplies for all beneficial purposes to achieve maximum economic development for the Commonwealth. Innovative alternatives for obtaining and developing additional supplies (e.g., desalinization, recycling and reuse) shall be encouraged.

4. Stream flows sufficient to support beneficial in-stream uses shall be protected.

5. The hydrologic boundaries of water resources shall be favored, whenever possible, for planning and project development.

6. The interdependency of water users which are within the same hydrologic unit, and the need to establish cooperative planning, management and protection of the common water resources shall be recognized.

7. Multi-purpose impoundment structures (e.g., water supply storage, flood control and recreation) shall be favored over single-purpose structures; upstream impoundments are to be favored over downstream impoundments.

8. The fishery resource of the Commonwealth is an important economic and recreational asset. In planning and constructing impoundment structures and other artificial obstructions, due regard shall be given to means and methods for protection of the fishery resource.

9. Cooperative programs between the state, federal, and local governments shall be encouraged; however, the principle of the sovereignty of this Commonwealth over all the waters within the Commonwealth shall be protected and preserved.

10. The natural interrelationship of surface and ground water shall be recognized. Evaluation of the hydrological role of ground water shall be made so that surface and ground water can be managed conjunctively.

11. Water conservation measures to prevent and minimize waste and promote wise use shall be utilized. Both supply management and demand techniques and programs such as leak detection, metering, installation of water-saving plumbing, and educational efforts shall be employed.

12. Appropriate management, planning and response strategies shall be utilized to reduce the impact of drought and other water shortages. Approaches which promote coordinated water distribution and emergency allocation by water users and suppliers shall be preferred.

§ 62.1-44.36:3. Development of a state water plan; components.--A. The state water plan shall consist of the following components:

1. The principles and policies described in § 62.1-44.36:2.*
2. Basin plans for each of the nine river basins as delineated by the U.S. Geological Survey and referred to as the Potomac-Shenandoah River Basin, the James River Basin, the Rappahannock River Basin, the Roanoke River Basin, the Chowan and Dismal Swamp River Basin, the Tennessee and Big Sandy River Basin, the Small Basins and Chesapeake Bay, the York River Basin, and the New River Basin. The basin plans developed by the Board shall (i) estimate current water withdrawals and use for agriculture, industry, domestic use, and other significant categories of water users, (ii) project water withdrawals and use by agriculture, industry, domestic use, and other significant categories of water users, (iii) evaluate, to the extent practicable, the ability of existing subsurface and surface waters to meet current and future water uses and identify those subbasins which may face a deficiency in water resources during the planning period, (iv) determine the suitability of potential sites as facilities for the storage of water, (v) delineate the subbasins within each basin using natural hydrologic boundaries, and (vi) establish a timetable for the submission of subbasin plans based on the projected water deficiencies in each subbasin. From time-to-time and at least every five years, the Board shall review each basin plan and shall either (i) prepare any amendments necessary to update the plan or (ii) issue a determination that no amendments are necessary, and the reasons supporting such a determination. The formulation and subsequent revisions of, or amendments to, the basin plan shall be subject to the provisions of the Administrative Process Act (§ 9-6.14:1 et seq.).

3. Subbasin plans submitted by political subdivisions and approved by the Board.

B. The state water plan shall reflect a planning period of not less than thirty years.

§ 62.1-44.36:4. Subbasin notifications.--The Board shall provide notice to each water user withdrawing surface or subsurface water in the subbasin who report usage under § 62.1-44.38* and each political subdivision of (i) the users presence in a particular subbasin and (ii) the requirement that the political subdivisions cooperatively submit a subbasin plan.

§ 62.1-44.36:5. Political subdivisions to develop subbasin plan; contents; advisory committee.--A. Political subdivisions, including water authorities, located within the subbasin shall be responsible for cooperatively developing a plan for managing demand and providing for an adequate supply of water in the

particular subbasin for a period of not less than thirty years. The subbasin plan shall be consistent with the policies and principles of § 62.1-44.36:2* and the Board's basin plan.

B. The subbasin plan shall include (i) a description of the strategies and specific projects to be implemented, (ii) documentation establishing the appropriateness of the chosen strategies and related projects, (iii) a timetable for implementation of the various strategies and projects, and (iv) a description of the procedures used in developing the plan and efforts made to include the public's participation in the development of the plan

C. During the process of formulating a plan the political subdivisions shall carefully consider the concerns of agricultural, commercial, industrial and environmental interests.

D. Upon approval of the subbasin plan by all of the political subdivisions within the basin, the plan shall be submitted to the Board for its review and approval.

E. To assist in their joint deliberations, the political subdivisions may establish a citizen advisory committee. The advisory committee shall be composed of citizens residing in the subbasin area, who represent local governmental, agricultural, industrial, commercial and environmental interests.

§ 62.1-44.36:6. Public participation.--The political subdivisions shall establish a procedure for the development of a subbasin plan which includes (i) provisions for public notice of all planning-related activities, (ii) holding of public hearings, and (iii) review of public comments for inclusion in the plan.

§ 62.1-44.36:7. Approval of subbasin plan.--A. The Board shall approve a subbasin plan if it is consistent with the policies and principles of § 62.1-44.36:2* and the Board's applicable basin plan. The Board's review of a subbasin plan shall be conducted pursuant to Article 3 (§.9-6.14:11 et. seq.) of the Administrative Process Act.

B. If the Board, as part of its periodic review of the basin plans, finds that there is a need to revise a subbasin plan, it shall notify the political subdivisions in the subbasin of this fact and shall establish a deadline for submission of the revised subbasin plan. The political subdivisions, jointly on their own motion, may revise their subbasin plan from time-to-time due to changing circumstances, and submit the revised plan to the Board for approval.

C. The Board shall either approve or reject a subbasin plan or revision of a subbasin plan within nine months of its date of submission. If a subbasin plan or a revised plan is rejected, the Board shall request that the plan be revised and resubmitted within a period of time to be established by the Board.

D. The decision of the Board may be appealed to the three-judge panel established under § 62.1-44.43:5° by (i) a local political subdivision within the subbasin region, (ii) those parties whose water use in the subbasin requires them to report their withdrawals pursuant to § 62.1-44.38*, or (iii) any person who

participated, in person or by submittal of written comments, in the Board's public hearing process.

§ 62.1-44.36:8. Failure to submit subbasin plan.--A. A subbasin plan or a revision to the subbasin plan requested by the Board shall be submitted as required by the timetable established in the basin plan. However, the local political subdivisions within the subbasin may be granted an extension in their date of submission, if the Board finds that local political subdivisions are making a good faith effort to complete the plan.

B. If the time period for completion of the plan has elapsed, the Board shall, in the absence of local action, develop the subbasin plan in accordance with the requirements for developing a subbasin plan contained in subsection B of § 62.1-44.36:5.*

§ 62.1-44.36:9. Consultation with other agencies or persons.--During the process of formulating or amending the state water plan, the Board shall consult with, and carefully evaluate, the recommendations of federal, state and local agencies and other interested persons. The Board shall give due deference to the recommendations of the Health Department with respect to the quality and quantity of drinking water. All agencies of the Commonwealth shall cooperate with the Board, and, upon request, provide assistance in carrying out the provisions of this chapter.

§ 62.1-44.38. Registration of certain data by water users; water supply planning assistance.--A. The Board shall prepare plans and programs for the management of the water resources of this Commonwealth in such a manner as to encourage, promote and secure the maximum beneficial use and control thereof. These plans and programs shall be prepared for each major river basin of this Commonwealth, and appropriate subbasins therein, including specifically the Potomac-Shenandoah River Basin, the Rappahannock River Basin, the York River Basin, the James River Basin, the Chowan River Basin, the Roanoke River Basin, the New River Basin, the Tennessee-Big Sandy River Basin, and for those areas in the Tidewater and elsewhere in the Commonwealth not within these major river basins. Reports for each basin shall be published by the Board.

B. In preparing river basin plan and program reports enumerated in subsection A of this section, the Board shall (i) estimate current water withdrawals and use for agriculture, industry, domestic use, and other significant categories of water users; (ii) project water withdrawals and use by agriculture, industry, domestic water use, and other significant categories of water users; (iii) estimate, for each major river and stream, the minimum instream flows necessary during drought conditions to maintain water quality and avoid permanent damage to aquatic life in streams, bays, and estuaries; (iv) evaluate, to the extent practicable, the ability of existing subsurface and surface waters to meet current and future water uses, including minimum instream flows, during drought conditions; (v) evaluate, in cooperation

~~with the Virginia Department of Health and local water supply managers, the current and future capability of public water systems to provide adequate quantity and quality of water; (vi) identify water management problems and alternative water management plans to address such problems; and (vii) evaluate hydrologic, environmental, economic, social, legal, jurisdictional, and other aspects of each alternative management strategy identified.~~

~~C.—The Board may, by regulation, require each water user withdrawing surface or subsurface water or both during each year to register, by a date to be established by the Board, water withdrawal and use data for the previous year including the estimated average daily withdrawal, maximum daily withdrawal, sources of water withdrawn, and volume of wastewater discharge, provided that the withdrawal exceeds one million gallons in any single month for use for crop irrigation, or that the daily average during any single month exceeds 10,000 gallons per day for all other users.~~

~~D.—The Board shall establish advisory committees to assist it in the formulation of such plans or programs and in formulating recommendations called for in subsection E of this section. In this connection, the Board may include committee membership for branches or agencies of the federal government, branches or agencies of the Commonwealth, branches or agencies of the government of any state in a river basin located within that state and Virginia, the political subdivisions of the Commonwealth, and all persons and corporations interested in or directly affected by any proposed or existing plan or program.~~

~~E.—The Board shall prepare plans or programs and shall include in reports prepared under subsection A of this section recommended actions to be considered by the General Assembly, the agencies of the Commonwealth and local political subdivisions, the agencies of the federal government, or any other persons that the Board may deem necessary or desirable for the accomplishment of plans or programs prepared under subsection B of this section.~~

~~F.—In addition to the preparation of plans called for in subsection A of this section, the B. The Board, upon written request of a political subdivision subdivisions of the Commonwealth, shall provide water supply planning assistance to such political subdivision; to include assistance in preparing a subbasin plan, drought management strategies, water conservation programs, evaluation of alternative water sources, state enabling legislation to facilitate a specific situation, applications for federal grants or permits, or other such planning activities to facilitate intergovernmental cooperation and coordination.~~

3. Water Transfers.

Virginia has experienced a number of problems involving the allocation of water between "water rich" and "water poor" areas. Options aimed at seeing that all interests involved in such transfers are protected and assuring that water is available when and where needed are presented below. The options provide varying balances between local and state control based on determinations of need,

impact and agreements between sending and receiving areas. The options contain varying provisions for registration of transfers, threshold levels for coverage, the unit of analysis for inclusion (i.e. whether the transfer is between jurisdictions, water basins, subbasins, etc.), information required when applying for authorization for a transfer, public participation, methods for agreeing to terms for the transfer, alternative parties with control over the terms of the transfer and standards of review.

The third statutory scheme combines a planning and a transfer statute to demonstrate how they could interrelate and includes several new options for the review of transfer agreements by the State.³¹ This option also includes provisions for enforcement based upon those currently found in Title 62.1. A statute creating a special court for the resolution of certain disputes is also included.

TRANSFER OPTION 1

§ 11111. Registration of certain transfers.-- The Board may, by regulation, require water users required to register under subsection C § 62.1-44.38 to indicate whether such withdrawal is in connection with the transfer of water between subbasins. If a withdrawal is related to a transfer between subbasins the Board may, by regulation, require information regarding (i) the location of delivery, (ii) the uses to which the water is put, (iii) the manner of transfer and (iv) such other information as it may require related to the transfer.

§ 22222. Authorization required for certain transfers.--A. No person may initiate a new or expanded transfer between subbasins where the proposed transfer is in excess of two million gallons per day or 0.1 percent of the mean daily flow in the case of a withdrawal from a free flowing body of water, or in excess of two million gallons per day or 0.1 percent of the total acre feet in the case of withdrawal from a lake or other impounded body of water, without a certificate of transfer issued by the Board.

B. An applicant for a transfer certificate shall petition the Board for such certificate. The petition shall be in writing and shall include the following:

- 1. Amount of the proposed transfer.**
- 2. Proposed uses for the water.**
- 3. Necessity and reasonableness of the amount of the water to be transferred.**
- 4. Present and reasonably foreseeable future detrimental and positive effects on the source subbasin, including present and future effects on public, industrial, and agricultural water supply needs; waste water assimilation; water quality; fish and wildlife habitat and migration; hydroelectric power generation; navigation; recreation; flooding and any other relevant factors.**

³¹ These alternatives are found in § 62.1-44.36:8 of Transfer Option 3.

5. Reasonably foreseeable detrimental and positive effects on the receiving subbasin, including effects on public, industrial, and agricultural water supply needs; waste water assimilation; water quality; fish and wildlife habitat and migration; hydroelectric power generation; navigation; recreation; flooding and any other relevant factors.

6. Mitigation measures proposed to minimize the detrimental effects.

7. Reasonable alternatives to the proposed transfer, including their probable costs, environmental impacts, and other significant factors.

8. Protection of the availability of water in the source subbasin to respond to emergencies, including drought.

9. Applicant's present and future proposed use of impoundment storage capacity to store water during high flow periods for use during low flow periods.

10. Description of the facilities to be used to transfer the water, including the location and capacity of water intakes, pumps, pipelines and other facilities.

11. Water conservation measures to be used by the receiving basin to assure efficient use of water and avoidance of waste.

12. Water conservation measures currently implemented or under consideration in the source or receiving subbasins.

13. Analysis of the impact of the withdrawal on riparian land owners located on the source and receiving bodies of water.

14. Copy of the agreement developed pursuant to § 33333.

15. Projections of population, industrial and economic growth in the sending and receiving subbasins.

16. Matters in the petition which are not agreed to by the parties to the transfer and a description of the basis for the dispute.

17. Any other information deemed necessary by the Board for review of the proposed water transfer.

C. Upon receipt of a complete petition, the Board shall hold a public hearing on the proposed transfer after giving at least thirty days' notice of the hearing as follows:

1. By publishing notice in the Virginia Register.

2. By publishing notice in newspapers of general circulation in the subbasins, as defined by the Board pursuant to subdivision (v) of § 62.1-44.36.3**, of withdrawal and delivery.

3. By written notice by first-class mail to each of the following:

a. A person who has registered a water withdrawal from the subbasin from which the proposed withdrawal would occur.

b. A person who has applied for or who has secured authorization for a transfer in the receiving or sending subbasin.

c. The governing body of each county, city and town that is located entirely or partially within the source or receiving subbasins.

d. All water and sewer authorities that withdraw water downstream from the point of withdrawal of the proposed transfer.

D. The notice of the public hearing shall include a description of the transfer request as deemed sufficient by the Board. The notice shall further indicate the

location where the full application may be reviewed and the procedure to be followed by anyone wishing to submit comments on the proposed transfer.

E. No approval shall be granted for a transfer of water unless the Board, based upon its review of the items listed in subsection B, the comments of the public, and such investigation as the Board deems necessary, finds that (i) the benefits of the proposed transfer outweigh the potential detriments of the transfer, (ii) the detriments will be mitigated to a reasonable degree, (iii) the agreement pursuant to § 33333 has been finalized, (iv) the transfer is consistent with the state water plan developed pursuant to § 62.1-44.36:3**, (v) the principles and policies in § 62.1-44.36:2** are followed and (vi) there is no other viable option.

F. The Board may authorize or deny a transfer as presented to it. In cases where an application is made for authorization to increase an existing transfer in existence on July 1, 1994, the Board shall have authority to approve or disapprove only the amount of the increase. If the Board approves the increase, the authorization shall be for the amount of the existing transfer plus the requested increase.

G. No person may initiate or continue a transfer of water that has been found by the Board to be inconsistent with the state water plan developed pursuant to § 62.1-44.36:3**, or the principles and policies found in § 62.1-44.36:2**.

H. The decision of the Board may be appealed to the three-judge panel established pursuant to § 62.1-44.43:5° by the parties submitting the application and any person who participated, in person or by the submittal of written comments during the Board's public hearing process.

§ 33333. Transfer agreements.--A. The parties to a transfer contemplated under § 22222 shall negotiate an agreement including the following items:

1. Terms of any monetary compensation.
2. Limits of the duration of the transfer agreement, not to exceed thirty years.
3. Conditions under which the agreement may be reopened for purposes of changing terms.
4. Provisions for the resumption of negotiations regarding the terms of the transfer before the expiration of the agreement.
5. Local conditions which will trigger a reduction in the amount of the transfer, including maintenance of instream flow requirements as may be established by the Board.
6. Provision of storage of excess flow in the source subbasin by the receiving subbasin for use in low-flow conditions.

B. If the parties cannot reach an agreement to the terms listed in of subsection A after a period of ninety days from the date of filing of a notice of dispute with the Board in a manner to be prescribed by the Board and such notice has not been withdrawn in a manner prescribed by the Board, the dispute shall be considered submitted to the Board for resolution. The Board shall review the terms of the agreement to assure consistency with the state water plan developed pursuant to § 62.1-44.36:3**, and the principles and policies in § 62.1-44.36:2**, but it may not

require changes to those terms unless inconsistency is found or the parties agree to such changes.

The Board may establish the terms of the agreement which are in dispute. The Board's review of the agreement shall be conducted pursuant to Article 3 (§ 9-6.14:11 et. seq.) of the Administrative Process Act.

C. The decision of the Board may be appealed to the three-judge panel established pursuant to § 62.1-44.43:5° by the parties to the proposed agreement.

TRANSFER OPTION TWO

§ 11111. Registration and authorization of water transfers.--A. No person may initiate or continue a water transfer of one million gallons per day or more but less than two million gallons per day without first registering the transfer by providing the Board the following information: (i) the source of the water, (ii) the location of the delivery, (iii) the uses of the water, and (iv) the manner of transfer.

B. No person may do any of the following without first securing the authorization of the Board:

1. Initiate a transfer of water of two million gallons per day or more.

2. Construct a facility or expand an existing facility that would increase the capacity of an existing transfer if the increase will cause the total transfer to equal or exceed two million gallons per day.

C. An applicant for authorization for a transfer shall petition the Board for such authorization. The petition shall be in writing and shall include the following:

1. Amount of the proposed transfer.

2. Proposed uses for the water.

3. Necessity and reasonableness of the amount of water to be transferred.

4. Present and reasonably foreseeable future detrimental and positive effects on the source basin, including present and future effects on public, industrial, and agricultural water supply needs; waste water assimilation; water quality; fish and wildlife habitat and migration; hydroelectric power generation; navigation; recreation; flooding and any other relevant factors.

5. Reasonably foreseeable detrimental and positive effects on the receiving basin, including effects on public, industrial, and agricultural water supply needs; waste water assimilation; water quality; fish and wildlife habitat and migration; hydroelectric power generation; navigation; recreation; flooding and any other relevant factors.

6. Mitigation measures proposed to minimize the detrimental effects.

7. Reasonable alternatives to the proposed transfer, including their probable cost, environmental impacts, and any other significant factors.

8. Protection of the availability of water in the source basin to respond to emergencies, including drought.

9. Applicant's present and future proposed use of impoundment storage capacity to store water during high flow periods for use during low flow periods.

10. Description of the facilities to be used to transfer the water, including the location and capacity of water intakes, pumps, pipelines and other facilities.

11. Water conservation measures to be used by the receiving basin to assure efficient use of water and avoidance of waste.

12. Water conservation measures currently implemented or under consideration in the sending or receiving basins.

13. Analysis of the impact of the withdrawal on riparian land owners located on the source and receiving bodies of water.

14. Copy of the agreement developed pursuant to § 22222.

15. Projections of population, industrial and economic growth in the sending and receiving basins.

16. Matters in the petition which are not agreed to by the parties to the transfer and a description of the basis for the dispute.

17. Any other information deemed necessary by the Board for review of the proposed water transfer.

D. Upon receipt of a complete petition, the Board shall hold a public hearing on the proposed transfer after giving at least thirty days' notice of the hearing as follows:

1. By publishing notice in the Virginia Register.

2. By publishing the notice in newspapers of general circulation in the river basin(s), as defined in § 62.1-44.36:3**, of withdrawal and delivery.

3. By written notice by first-class mail to each of the following:

a. A person who has registered a water withdrawal from the basin from which the proposed withdrawal would occur.

b. A person who has applied for or who has secured authorization for a transfer in the receiving or sending basins.

c. The governing body of each county, city and town that is located entirely or partially within the source or receiving basins.

d. All water and sewer authorities that withdraw water downstream from the point of withdrawal of the proposed transfer.

E. The notice of the public hearing shall include a description of the volume of the proposed transfer, the points of withdrawal and delivery and the proposed uses for the water as described in the transfer application. The notice shall further indicate the location where the full application may be reviewed and the procedure to be followed by anyone wishing to submit comments on the proposed transfer.

F. No approval shall be granted for a transfer of water unless the Board, based upon its review of the items listed in subsection C, the comments of the public, and such investigation as the Board deems necessary, finds that (i) the benefits of the proposed transfer outweigh the potential detriments of the transfer, (ii) the detriments will be mitigated to a reasonable degree, (iii) the agreement pursuant to § 22222 has been finalized, (iv) the transfer is consistent with the state water plan developed pursuant to § 62.1-44.36:3**, (v) the principles and policies found in § 62.1-44.36:2** are followed, and (vi) there is no other viable alternative.

G. The Board may authorize or deny a transfer in whole or in part. In cases where an application is made for authorization to increase an existing transfer in

existence on July 1, 1994, the Board shall have authority to approve or disapprove, in whole or in part, only the amount of the increase. If the Board approves an increase, the authorization shall be for the amount of the existing transfer plus the approved increase.

H. No person may initiate or continue a transfer that has been found by the Board to be inconsistent with the state water plan developed pursuant to § 62.1-44.36:3**, or the principles and policies found in § 62.1-44.36:2**.

I. The decision of the Board may be appealed to the three-judge panel established pursuant to § 62.1-44.43:5° by the parties submitting the application and any person who participated, in person or by the submittal of written comments during the Board's public hearing process.

§ 2222. Transfer agreements.--A. The parties to a transfer contemplated under § 11111 shall reach an agreement including the following terms:

1. Terms of any monetary compensation.
2. Limits of the duration of the transfer agreement, not to exceed thirty years.
3. Conditions under which the agreement may be reopened for purposes of changing terms.
4. Provisions for the resumption of negotiations regarding the terms of the transfer before the expiration of the agreement.
5. Local conditions which will trigger a reduction in the amount of the transfer, including maintenance of instream flow requirements as may be established by the Board.
6. Provision of storage of excess flow in the sending basin by the receiving basin for use in low-flow conditions.

B. If the parties cannot reach an agreement to the terms of such transfer listed in subsection A after a period of ninety days from the date of filing of a notice of dispute with the Board in a manner to be prescribed by the Board and such notice has not been withdrawn in a manner prescribed by the Board, the dispute shall be considered submitted to the Board for resolution. The Board shall review the terms of the agreement to assure consistency with the state water plan developed pursuant to § 62.1-44.36:3**, and the principles and policies in § 62.1-44.36:2** but it may not require changes to those terms unless they are inconsistent with the requirements of the state plan or the parties agree to such changes.

The Board may establish the terms of the agreement which are in dispute. The Board's review of the agreement shall be conducted pursuant to Article 3 (§ 9-6.14:11 et. seq.) of the Administrative Process Act.

C. The decision of the Board may be appealed to the three-judge panel established pursuant to § 62.1-44.43:5° by the parties to the agreement.

**TRANSFER OPTION 3:
WATER PLANNING AND TRANSFER COMBINATION**

§ 62.1-44.36:1. Board responsible for water resources planning.--Being cognizant of the crucial importance to the health and welfare of the people of Virginia and of the need of a water supply to assure further industrial growth and economic prosperity for the Commonwealth, and recognizing the necessity for continuous cooperative planning and effective state level guidance in the use and development of water resources, the Board shall be responsible for planning the development, conservation, management, and utilization of Virginia's water resources.

§ 62.1-44.36:2. Development of plan; formulation of policies.-- A. The Board shall develop a state water plan that provides guidance for the orderly and coordinated management, conservation, development and utilization of the water resources of the Commonwealth.

B. In formulating the state water plan, consideration shall be given, among other things, to the following principles and policies:

1. Existing water rights shall be protected and preserved, subject to the principle that all of the state waters belong to the public for use by the people for beneficial purposes without waste.

2. Adequate and safe supplies shall be preserved and protected for human consumption, while conserving maximum supplies for other beneficial uses. When proposed uses of water are in conflict or when available supplies of water are insufficient for all who desire to use them, preference shall be given to human consumption over all other uses.

3. It is in the public interest to integrate and coordinate uses of water and to augment existing supplies for all beneficial purposes to achieve maximum economic development for the Commonwealth. Innovative alternatives for obtaining and developing additional supplies (e.g., desalinization, recycling and reuse) shall be encouraged.

4. Stream flows sufficient to support beneficial in-stream uses shall be protected.

5. The hydrologic boundaries of water resources shall be favored, whenever possible, for planning and project development.

6. The interdependency of water users which are within the same hydrologic unit, and the need to establish cooperative planning, management and protection of the common water resources shall be recognized.

7. Multi-purpose impoundment structures (e.g., water supply storage, flood control and recreation) shall be favored over single-purpose structures; upstream impoundments are to be favored over downstream impoundments.

8. The fishery resource of the Commonwealth is an important economic and recreational asset. In planning and constructing impoundment structures and

other artificial obstructions, due regard shall be given to means and methods for protection of the fishery resource.

9. Cooperative programs between the state, federal, and local governments shall be encouraged; however, the principle of the sovereignty of this Commonwealth over all the waters within the Commonwealth shall be protected and preserved.

10. The natural interrelationship of surface and ground water shall be recognized. Evaluation of the hydrological role of ground water shall be made so that surface and ground water can be managed conjunctively.

11. Water conservation measures to prevent and minimize waste and promote wise use shall be utilized. Both supply management and demand techniques and programs such as leak detection, metering, installation of water-saving plumbing, and educational efforts shall be employed.

12. Appropriate management, planning and response strategies shall be utilized to reduce the impact of drought and other water shortages. Approaches which promote coordinated water distribution and emergency allocation by water users and suppliers shall be preferred.

§ 62.1-44.36:3. Development of a state water plan; components.-A. The state water plan shall consist of the following components:

1. The principles and policies described in § 62.1-44.36:2.*

2. Basin plans for each of the nine river basins as delineated by the U.S. Geological Survey and referred to as the Potomac-Shenandoah River Basin, the James River Basin, the Rappahannock River Basin, the Roanoke River Basin, the Chowan and Dismal Swamp River Basin, the Tennessee and Big Sandy River Basin, the Small Basins and Chesapeake Bay, the York River Basin, and the New River Basin. The basin plans developed by the Board shall (i) estimate current water withdrawals and use for agriculture, industry, domestic use, and other significant categories of water users, (ii) project water withdrawals and use by agriculture, industry, domestic use, and other significant categories of water users, (iii) evaluate, to the extent practicable, the ability of existing subsurface and surface waters to meet current and future water uses and identify those subbasins which may face a deficiency in water resources during the planning period, (iv) determine the suitability of potential sites as facilities for the storage of water, (v) delineate the subbasins within each basin using natural hydrologic boundaries, and (vi) establish a timetable for the submission of subbasin plans based on the projected water deficiencies in each subbasin. From time to time and at least every five years, the Board shall review each basin plan and shall either (i) prepare any amendments necessary to update the plan or (ii) issue a determination that no amendments are necessary, and the reasons supporting such a determination. The formulation and subsequent revisions of, or amendments to, the basin plan shall be subject to the provisions of the Administrative Process Act (§ 9-6.14:1 et seq.).

3. Subbasin plans submitted by subbasin commissions and approved by the Board.

B. The state water plan shall reflect a planning period of not less than thirty years.

§ 62.1-44.36:4. Subbasin notifications.--The Board shall provide notice to each water user withdrawing surface or subsurface water in the subbasin who report usage under § 62.1-44.38* of (i) the users presence in a particular subbasin and (ii) the requirement that the subbasin commission submit a subbasin plan.

§ 62.1-44.36:5. Subbasin commissions; composition.--A. Each subbasin commission shall be composed of the following members to be appointed by the Governor:

1. One member shall represent each city and county within the subbasin; however, in no instance shall there be fewer than four members representing cities and counties;

2. One member shall represent agricultural interests;

3. Two members shall be selected from among the industrial, manufacturing, mining and electrical power generation sectors; and

4. One member shall represent environmental interests.

B. Members shall serve for terms of four years and may succeed themselves, except that appointments to fill vacancies shall be for the unexpired terms. Members shall be residents of the particular subbasin.

C. Members shall not receive per diem, compensation, or travel expenses for their service on the subbasin commission.

D. The subbasin commission shall elect a chairman and vice chairman annually from among its members. A majority of the members of the subbasin commission shall constitute a quorum.

E. Staff to the subbasin commission shall be provided by those entities represented on the subbasin commission, and, upon request, by the State Water Control Board. The State Water Control Board shall, upon request, provide technical assistance to the subbasin commission.

§ 62.1-44.36:6. Subbasin commission responsible for plan development; content: submission.--A. Each subbasin commission shall be responsible for developing a plan for managing demand and providing for an adequate supply of water in the particular subbasin for a period of not less than thirty years. The subbasin plan shall be consistent with the policies and principles of § 62.1-44.36:2* and the Board's basin plan.

B. The subbasin plan shall include (i) a description of the strategies and specific projects to be implemented, (ii) documentation establishing the appropriateness of the chosen strategies and projects, (iii) a timetable for implementation of the various strategies and related projects, and (iv) a description of the procedures used in developing the plan and efforts made to include the public's participation in the development of the plan.

C. Upon approval of the subbasin plan by three-fourths of the subbasin commission membership, the plan shall be submitted to the Board for its review and approval.

§ 62.1-44.36:7. Proposed water transfers; special procedures--A. Any subbasin plan that includes a proposal for a new or expanded transfer between subbasins where the proposed transfer is in excess of two million gallons per day or 0.1 percent of the mean daily flow in the case of a withdrawal from a free flowing body of water, or in excess of two million gallons per day or 0.1 percent of the total acre feet in the case of withdrawal from a lake or other impounded body of water, shall include the following information when submitted to the Board for review and approval:

1. Amount of the proposed transfer.
2. Proposed uses for the water.
3. Necessity and reasonableness of the amount of the water to be transferred.
4. Present and reasonably foreseeable future detrimental and positive effects on the source subbasin, including present and future effects on public, industrial, and agricultural water supply needs; wastewater assimilation; water quality; fish and wildlife habitat and migration; hydroelectric power generation; navigation; recreation; flooding and any other relevant factors.
5. Reasonably foreseeable detrimental and positive effects on the receiving subbasin, including effects on public, industrial, and agricultural water supply needs; wastewater assimilation; water quality; fish and wildlife habitat and migration; hydroelectric power generation; navigation; recreation; flooding and any other relevant factors.
6. Mitigation measures proposed to minimize the detrimental effects.
7. Reasonable alternatives to the proposed transfer, including their probable costs, environmental impacts, and other significant factors.
8. Protection of the availability of water in the source subbasin to respond to emergencies, including drought.
9. Applicant's present and future proposed use of impoundment storage capacity to store water during high flow periods for use during low flow periods.
10. General description of the facilities to be used to transfer the water, including the location and capacity of water intakes, pumps, pipelines and other facilities.
11. Water conservation measures to be used in the receiving subbasin to assure efficient use of water and avoidance of waste.
12. Water conservation measures currently implemented or under consideration in the sending or receiving subbasins.
13. Analysis of the impact of the withdrawal on riparian land owners located on the source and receiving bodies of water.
14. Projections of population, industrial and economic growth in the source and receiving subbasins.

15. Any other information deemed necessary by the Board for review of the proposed water transfer.

B. No proposed transfer shall be approved as a subbasin strategy unless the Board, based upon its review of the items listed in subsection A, the comments of the public, and such investigation as the Board deems necessary, finds that (i) the benefits of the proposed transfer outweigh the potential detriments of the transfer, (ii) the detriments will be mitigated to a reasonable degree, and (iii) there is no other viable option.

C. If the proposed subbasin strategy seeks to increase a transfer in existence on July 1, 1994, the Board shall have authority to approve or disapprove only the amount of the increase. If the Board approves the increase, the authorization shall be for the amount of the existing transfer plus the requested increase.

§ 62.1-44.36:8. Transfer agreements and certificates.--A. Any proposed transfer approved as part of a subbasin plan shall be implemented through an agreement approved by the Board that includes the following items:

1. Terms of any monetary compensation.
2. Limits of the duration of the transfer agreement, not to exceed thirty years.
3. Conditions under which the agreement may be reopened for purposes of changing terms.

4. Provisions for the resumption of negotiations regarding the terms of the transfer before the expiration of the agreement.

5. Local conditions which will trigger a reduction in the amount of the transfer, including maintenance of instream flow requirements as may be established by the Board.

6. Provision of storage of excess flow in the sending basin by the receiving basin for use in low-flow conditions.

B. (Alternative 1) If the parties cannot reach an agreement on the terms of such transfer listed in subsection A, after a period of ninety days from the date of filing of a notice of dispute in a manner to be prescribed by the Board and such notice has not been withdrawn in a manner prescribed by the Board, the matter shall be considered submitted to the Board for resolution. The Board may review the terms of the agreement to assure consistency with the state water plan developed pursuant to § 62.1-44.36:3*, and the principles and policies in § 62.1-44.36:2*, but it may not require changes to those terms unless they are inconsistent with the requirements of the state water plan or the parties agree to such changes.

The Board may establish the terms of the agreement which are in dispute.

The Board's review of the agreement shall be conducted pursuant to Article 3 (§ 9-6.14:11 et. seq.) of the Administrative Process Act.

B. (Alternative 2) If the parties cannot reach an agreement on the terms of such transfer listed in subsection A, after a period of ninety days from the date of filing of a notice of dispute in a manner to be prescribed by the Board and such notice has not been withdrawn in a manner prescribed by the Board, the matter shall be considered submitted to the Board for review. The Board may review the

settled terms of the agreement to assure consistency with the state water plan developed pursuant to § 62.1-44.36:3*, and the principles and policies in § 62.1-44.36:2*.

The Board shall review the disputed terms and may refer the matter back to the parties with recommendations on terms of the agreement for renegotiation.

The Board's review of the agreement shall be conducted pursuant to Article 3 (§ 9-6.14:11 et. seq.) of the Administrative Process Act.

B. (Alternative 3) If the parties cannot reach an agreement on the terms of such transfer listed in subsection A, after a period of ninety days from the date of filing of a notice of dispute in a manner to be prescribed by the Board and such notice has not been withdrawn in a manner prescribed by the Board, the matter shall be considered submitted to the Board for review. The Board may review the settled terms of the agreement to assure consistency with the state water plan developed pursuant to § 62.1-44.36:3*, and the principles and policies in § 62.1-44.36:2*.

The Board shall refer the matter back to the party seeking the transfer to amend its subbasin plan to include an alternative source of water.

The Board's review of the agreement shall be conducted pursuant to Article 3 (§ 9-6.14:11 et. seq.) of the Administrative Process Act.

C. Once an agreement has been finalized and approved by the Board, the Board shall issue a certificate for the transfer which incorporates the terms of the agreement.

D. Any certificate of transfer issued by the Board may, after notice and opportunity for a hearing, be amended or revoked on any of the following grounds or for good cause as may be provided in the regulations of the Board:

1. The certificate holder has violated any regulation or order of the Board pertaining to transfers, any condition of a transfer approval, any provision of this chapter, or any order of a court, where such violation presents a hazard to human health or the environment or is representative of a pattern of serious or repeated violations which, in the opinion of the Board, demonstrates the certificate holder's disregard for or inability to comply with applicable laws, regulations, or requirements;

2. The certificate holder has failed to disclose fully all relevant material facts or has misrepresented a material fact in applying for authorization for a transfer, or any other report or document required under this chapter or under the transfer regulations of the Board;

3. The transfer endangers human health or the environment and can be modified to an acceptable degree by amendment or revocation of the certificate;

4. There exists a material change in the basis on which the certificate was granted that requires either a temporary or permanent reduction or elimination of the transfer to protect human health or the environment.

E. Appeal from decisions of the Board shall be to a three-judge panel established pursuant to §62.1-44.43:5*.

§ 62.1-44.36:9. Public participation in formulating subbasin plan; public hearing.--A. In formulating a subbasin plan, each subbasin commission shall afford interested persons an opportunity to submit data, views and arguments, either orally or in writing.

B. A subbasin commission shall adopt or amend a subbasin plan only after holding at least one public hearing within the subbasin area. At least sixty days in advance of the hearing on the subbasin plan, a notice shall be published in a newspaper of general circulation within the subbasin area; informing the public of the date, time and place of the hearing. The notice shall also include (i) a brief summary of the proposed plan and (ii) information on how a copy of the plan may be obtained.

C. Prior to the hearing on the subbasin plan, copies of the plan shall be available from the subbasin commission. The subbasin commission shall forward a copy of the proposed plan to each city or county within the subbasin area.

D. A public comment period for the subbasin plan shall extend from the date of publication of the notice of the public hearing until thirty days after the holding of the final public hearing.

E. All notices, written submittals, and summaries of the subbasin commission's proceedings shall be matters of public record and made available for public inspection.

§ 62.1-44.36:10. Approval of subbasin plan.--A. The Board shall approve a subbasin plan if it is consistent with the policies and principles of § 62.1-44.36:2* and the Board's basin plan. The review of a subbasin plan shall be conducted pursuant to Article 3 (§ 9-6.14:11 et seq.) of the Administrative Process Act..

B. If the Board, as part of its periodic review of the basin plans, finds that there is a need to revise a subbasin plan, it shall notify the subbasin commission of this fact, and shall establish a deadline for submission of the revised subbasin plan. The subbasin commission, on its own motion, may revise its plan from time-to-time due to changing circumstances, and submit the plan to the Board for approval.

C. The Board shall either approve or reject a subbasin plan or any revision within nine months of its date of submission. If a subbasin plan or a revised plan is rejected, the Board shall request that the plan be amended and resubmitted within a period of time to be established by the Board.

D. The decision of the Board may be appealed to the three-judge panel established under §62.1-44.43:5* by (i) a city or county within the subbasin region, (ii) any person who resides in subbasin area, or (iii) any person who participated, in person or by submittal of written comments, in the Board's public hearing process.

§ 62.1-44.36:11. Failure to submit subbasin plan.--A. A subbasin plan or a revision to the subbasin plan requested by the Board shall be submitted as required by the timetable established in the basin plan. However, a subbasin commission may be granted an extension in its date of submission, if the Board finds that the subbasin commission is making a good faith effort to complete the plan.

B. If the time period for completion of the plan has elapsed, the Board shall, in the absence of action by the subbasin commission, develop the subbasin plan in accordance with the requirements for developing a subbasin plan contained in subsection B of § 62.1-44.36:6*.

§ 62.1-44.36:12. Consultation with other agencies or persons.--During the process of formulating or amending the state water plan, the Board shall consult with, and carefully evaluate, the recommendations of federal and state agencies (particularly the Health Department with respect to the quality and quantity of drinking water), local agencies and other interested persons. All agencies of the Commonwealth shall cooperate with the Board, and, upon request, provide assistance in carrying out the provisions of this chapter.

~~§ 62.1-44.38. Registration of certain data by water users.--A. The Board shall prepare plans and programs for the management of the water resources of this Commonwealth in such a manner as to encourage, promote and secure the maximum beneficial use and control thereof. These plans and programs shall be prepared for each major river basin of this Commonwealth, and appropriate subbasins therein, including specifically the Potomac-Shenandoah River Basin, the Rappahannock River Basin, the York River Basin, the James River Basin, the Chowan River Basin, the Roanoke River Basin, the New River Basin, the Tennessee-Big Sandy River Basin, and for those areas in the Tidewater and elsewhere in the Commonwealth not within these major river basins. Reports for each basin shall be published by the Board.~~

~~B. In preparing river basin plan and program reports enumerated in subsection A of this section, the Board shall (i) estimate current water withdrawals and use for agriculture, industry, domestic use, and other significant categories of water users; (ii) project water withdrawals and use by agriculture, industry, domestic water use, and other significant categories of water users; (iii) estimate, for each major river and stream, the minimum instream flows necessary during drought conditions to maintain water quality and avoid permanent damage to aquatic life in streams, bays, and estuaries; (iv) evaluate, to the extent practicable, the ability of existing subsurface and surface waters to meet current and future water uses, including minimum instream flows, during drought conditions; (v) evaluate, in cooperation with the Virginia Department of Health and local water supply managers, the current and future capability of public water systems to provide adequate quantity and quality of water; (vi) identify water management problems and alternative water management plans to address such problems; and (vii) evaluate hydrologic, environmental, economic, social, legal, jurisdictional, and other aspects of each alternative management strategy identified.~~

~~C. The Board may, by regulation, require each water user withdrawing surface or subsurface water or both during each year to register, by a date to be established by the Board, water withdrawal and use data for the previous year including the estimated average daily withdrawal, maximum daily withdrawal, sources of water~~

withdrawn, and volume of wastewater discharge, provided that the withdrawal exceeds one million gallons in any single month for use for crop irrigation, or that the daily average during any single month exceeds 10,000 gallons per day for all other users.

~~D. The Board shall establish advisory committees to assist it in the formulation of such plans or programs and in formulating recommendations called for in subsection E of this section. In this connection, the Board may include committee membership for branches or agencies of the federal government, branches or agencies of the Commonwealth, branches or agencies of the government of any state in a river basin located within that state and Virginia, the political subdivisions of the Commonwealth, and all persons and corporations interested in or directly affected by any proposed or existing plan or program.~~

~~E. The Board shall prepare plans or programs and shall include in reports prepared under subsection A of this section recommended actions to be considered by the General Assembly, the agencies of the Commonwealth and local political subdivisions, the agencies of the federal government, or any other persons that the Board may deem necessary or desirable for the accomplishment of plans or programs prepared under subsection B of this section.~~

~~F. In addition to the preparation of plans called for in subsection A of this section, the Board, upon written request of a political subdivision of the Commonwealth, shall provide water supply planning assistance to such political subdivision, to include assistance in preparing drought management strategies, water conservation programs, evaluation of alternative water sources, state enabling legislation to facilitate a specific situation, applications for federal grants or permits, or other such planning activities to facilitate intergovernmental cooperation and coordination.~~

B. The Board may, by regulation, require water users required to register under subsection A to indicate whether such withdrawal is in connection with the transfer of water between subbasins. If a withdrawal is related to a transfer between basins, the Board may, by regulation, require information regarding (i) the location of delivery, (ii) the uses to which the water is put, (iii) the manner of transfer and (iv) such other information as it may require related to the transfer.

§ 62.1-44.43. Additional powers of Board.--In addition to other powers conferred by the foregoing sections, the Board shall have the following powers:

(a) To administer all funds available to the Board for carrying out the purposes and duties prescribed in §§ 62.1-44.36 through 62.1-44.43:4*;

(b) To disburse funds to any department, commission, board, agency, officer or institution of the Commonwealth, or any political subdivision thereof for carrying out such purposes but in the disbursement of such funds the Board shall have no power to include, require or consider membership or nonmembership in any group, organization or political entity of whatsoever nature, and any formula for such distribution; except to the extent as may be required for qualification for such federal funds as may be involved in such distribution;

(c) To apply to any appropriate agency or officer of the United States for participation in or the receipt of aid from federal programs respecting or related to conservation or development of the Commonwealth's water and related land resources;

(d) To act either independently or jointly with any department, commission, board, agency, officer or institution of the Commonwealth or any political subdivision thereof in order to carry out the Board's powers and duties;

(e) To accept gifts, bequests and any other things to be used for carrying out its purposes, powers and duties.;

(f) To issue certificates for water transfers;

(g) To issue special orders as provided in § 62.1-44.43:2*;

(h) To enter, at reasonable times and under reasonable circumstances, any establishment or upon any property, public or private, for the purposes of obtaining information, conducting surveys or inspections, or inspecting transfer facilities, and to duly authorize agents to do the same, to ensure compliance with any permits, standards, policies, rules, regulations, rulings and special orders which it may adopt, issue or establish to carry out the provisions of this chapter;

(i) To issue special exceptions pursuant to § 62.1-44.43:1*;

(j) To adopt such regulations as it deems necessary to administer and enforce the provisions of this chapter; and

(k) To delegate to the director of the Department of Environmental Quality any of the powers and duties invested in it to administer and enforce the provisions of this chapter except the adoption and promulgation of rules, standards or regulations; the revocation of permits; and the issuance, modification, or revocation of orders except in case of an emergency as provided in subsection B of § 62.1-44.43:2*.

§ 62.1-44.43:1. Issuance of special exceptions.--A. The Board may issue special exceptions to allow a transfer in cases of unusual situations where requiring a certificate for a transfer would be contrary to the intended purpose of the Act.³²

B. In reviewing an application for a special exception, the Board may consider the amount and duration of the proposed transfer, the beneficial use intended for the water, and the effect of the withdrawal on human health and the environment. Any person requesting a special exception shall submit an application to the Board containing such information as the Board shall require by regulation adopted pursuant to this chapter.

C. Any special exception issued by the Board shall state the terms pursuant to which the applicant may transfer water, including the amount of water that may be transferred in any period and the duration of the special exception. No special exception shall be issued for a term exceeding ten years.

D. A violation of any term or provision of a special exception shall subject the holder thereof to the same penalties and enforcement procedures as would apply to a violation of a transfer certificate.

³² "The Act" refers to whatever transfer option is selected.

E. The Board shall have the power to amend or revoke any special exception after notice and opportunity for hearing on the grounds set forth in subsection D of § 62.1-44.36:8 for amendment or revocation of a transfer certificate.

§ 62.1-44.43:2. Issuance of special orders.--A. The Board may issue special orders requiring any person who has (i) violated the terms and provisions of a transfer certificate issued by the Board to comply with such terms and provisions, (ii) failed to comply with a directive from the Board to comply with such directive, or (iii) failed to comply with the provisions of this chapter or any decision of the Board pertaining to transfers to comply with such provision or decision.

B. Such special orders are to be issued only after a hearing with at least thirty days' notice to the affected person of the time, place and purpose thereof, and they shall become effective not less than fifteen days after service by certified mail, sent to the last known address of such person, with the time limits counted from the date of such mailing; however, if the Board finds that any such person is grossly affecting, or presents an imminent and substantial danger to, (i) the public welfare, safety or health; (ii) a public water supply; or (iii) a commercial, industrial, agricultural or other beneficial use, it may issue, without advance notice or hearing, an emergency special order directing the person to cease such transfer immediately and shall provide an opportunity for a hearing, after reasonable notice as to the time and place thereof to the person, to affirm, modify, amend or cancel such emergency special order. If a person who has been issued such a special order or an emergency special order is not complying with the terms thereof, the Board may proceed in accordance with § 62.1-44.43:3*, and where the order is based on a finding of an imminent and substantial danger, the court shall issue an injunction compelling compliance with the emergency special order pending a hearing by the Board. If an emergency special order requires cessation of a transfer, the Board shall provide an opportunity for a hearing within forty-eight hours of the issuance of the injunction.

C. The provisions of this section notwithstanding, the Board may proceed directly under § 62.1-44.43:4* for any past violation or violations of any provision of this chapter or any regulation duly promulgated hereunder.

D. With the consent of any person who has violated or failed, neglected or refused to obey any regulation or order of the Board pertaining to transfers, any condition of a transfer certificate or any provision of this chapter, the Board may provide, in an order issued by the Board against such person, for the payment of civil charges for past violations in specific sums not to exceed the limit specified in § 62.1-44.43:4*. Such civil charges shall be instead of any appropriate civil penalty which could be imposed under subsection A of § 62.1-44.43:4* and shall not be subject to the provisions of § 2.1-127.

§ 62.1-44.43:3. Enforcement by injunction, etc.--Any person violating or failing, neglecting or refusing to obey any rule, regulation, order, standard or requirement of the Board pertaining to transfers; any provision of any transfer

certificate issued by the Board; or any provision of this chapter may be compelled to obey same and to comply therewith in a proceeding instituted by the Board in any appropriate court for injunction, mandamus or other appropriate remedy. The Board shall be entitled to an award of reasonable attorneys' fees and costs in any action brought by the Board under this section in which it substantially prevails on the merits of the case, unless special circumstances would make an award unjust.

§ 62.1-44.43:4. Penalties.--A. Any person who violates any provision of this chapter, or who fails, neglects or refuses to comply with any order of the Board, or order of a court, pertaining to transfers, issued as herein provided, shall be subject to a civil penalty not to exceed \$25,000 for each violation within the discretion of the court. Each day of violation of each requirement shall constitute a separate offense.

Such civil penalties may, in the discretion of the court assessing them, be directed to be paid into the treasury of the county, city, or town in which the violation occurred to be used for the purpose of conserving, developing or utilizing water resources therein in such manner as the court may, by order, direct, except that where the person in violation is such county, city or town itself, or its agent, the court shall direct such penalty to be paid to the State Treasurer for deposit into the Virginia Environmental Emergency Response Fund pursuant to Chapter 25 (§ 10.1-2500 et seq.) of Title 10.1.

With the consent of any person in violation of this chapter, the Board may provide, in an order issued by the Board against the person, for the payment of civil charges. These charges shall be in lieu of the civil penalties referred to above. Such civil charges shall be deposited by the State Treasurer into the Virginia Environmental Emergency Response Fund.

B. Any person willfully or negligently violating any provision of this chapter, any regulation or order of the Board pertaining to transfers, any condition of a transfer certification or any order of a court shall be guilty of a misdemeanor punishable by confinement in jail for not more than twelve months and a fine of not less than \$2,500 nor more than \$25,000, either or both. Any person who knowingly violates any provision of this chapter, any regulation or order of the Board pertaining to transfers, any condition of a transfer certificate or any order of a court issued as herein provided, or who knowingly makes any false statement in any form or application required to be submitted under this chapter, shall be guilty of a felony punishable by a term of imprisonment of not less than one year nor more than three years or, in the discretion of the jury or the court trying the case without a jury, confinement in jail for not more than twelve months and a fine of not less than \$5,000 nor more than \$50,000 for each violation. Any defendant that is not an individual shall, upon conviction of a violation under this subsection, be sentenced to pay a fine of not less than \$10,000. Each day of violation of each requirement shall constitute a separate offense.

C. Any person who knowingly violates any provision of this chapter, and who knows at that time that he thereby places another person in imminent danger of

death or serious bodily harm, shall, upon conviction, be guilty of a felony punishable by a term of imprisonment of not less than two years nor more than fifteen years and a fine of not more than \$250,000, either or both. A defendant that is not an individual shall, upon conviction of a violation under this subsection, be sentenced to pay a fine not exceeding the greater of one million dollars or an amount that is three times the economic benefit realized by the defendant as a result of the offense. The maximum penalty shall be doubled with respect to both fine and imprisonment for any subsequent conviction of the same person under this subsection.

D. Criminal prosecution under this section shall be commenced within three years of discovery of the offense, notwithstanding the limitations provided in any other statute.

§ 62.1-44.43:5. Special three-judge panel.--A. For purposes of appeal from a final decision of the Board made pursuant to §§ 62.1-44.36:7*, 62.1-44.36:8* or 62.1-44.36:10*, a panel of three judges of the Court of Appeals shall be selected by the Chief Justice of the Supreme Court. The panel shall be comprised of judges who do not sit in any subbasin, as defined by the Board pursuant to § 62.1-44.36:3*, involved in the dispute.

B. The burden shall be upon the moving party complaining of the agency action to designate and demonstrate an error of law in (i) compliance with the statutory authority, jurisdictional limitations, or right as provided in the basic law, (ii) observance of required procedures wherein any failure therein is not mere harmless error, or (iii) the substantiality of the evidential support for the findings of the Board.

C. The Supreme Court shall designate the location in which the panel shall sit and such procedures as it deems necessary.

D. Appeal from a decision of the three-judge panel established pursuant to subsection A of this section shall be to the Supreme Court.

4. Development.

The development options take into consideration the acquisition, construction, financing and management of major water projects. Three specific options are presented. "Option 4" is a set of proposed amendments that may be appropriate if state agencies are to increase their roles and a state water plan is developed.

Some noted advantages to an increased state role in development are economies of scale, the potential for a smaller environmental impact from a few large projects than could result from a high number of small, haphazardly placed projects, and smoother permit approval due to the regional nature of projects and the clout of state involvement.

It may be advisable to reserve final decision on development options until a planning mechanism has been chosen in order to see which is more compatible.

Option 1: This option, based on the Texas Water Storage Acquisition Program³³, would allow the Virginia Resources Authority (VRA) to issue revenue bonds to finance the development and acquisition of water projects. The costs would be paid from the sale of impounded water or the sale, use or lease of a water project. Once the bonds are satisfied, the project ownership would be placed with those who covered the costs of the bonds.

The issuance of bonds and financing scheme follow closely those currently authorized for the VRA and in the Sewer and Water Authority Act.³⁴

Option 2: This option, based on the Georgia Water Supply Act³⁵, would allow the SWCB to issue revenue bonds of the Commonwealth to finance the development or acquisition of water projects. The costs would be paid from fees for withdrawals of impounded water. Project ownership remains with the State after the bonds are paid, increasing the State's long-term control and involvement with the project. This option also expands the role of the State over the role found in option 1 in that the state is more involved in the provision of water. A potential drawback is that it places the SWCB in a new role--that of water development rather than water quality. Another significant difference is a provision that compensates the localities where a project is located for loss of revenue caused by land being taken out of the tax base by the project. Models for the financing and bond provisions are the provisions used for transportation bonds and state park revenue bonds.

Option 3: This option capitalizes the Water Supply Revolving Fund³⁶ with moneys from a severance fee on water. Moneys in the fund are to be loaned to local governments for the development of water supply projects. The existing revolving fund has not been capitalized to a level that would allow for significant development of a water project. States that have taken this approach include Kansas (3 cents per 1000 gallons) and Arizona (\$5 per acre foot with \$2 going to supply and development projects).

Option 4: Option 4 is a group of proposed amendments that tie local water supply development actions to a state water plan. They may be appropriate if development of reservoirs and other "major" water supply projects are to be within the jurisdiction of a state agency or if a state planning mechanism is established.

³³ Tx. Code, Water Vol. 1, §§ 15.301 through 15.331.

³⁴ Va. Code § 15.1-1239 et seq.

³⁵ Ga. Code § 12-5-470 et seq.

³⁶ Va. Code § 62.1-233 et seq.

**Development Option 1:
Virginia Resources Authority**

**Chapter 23.3.
Water Project Revenue Bond Act.**

§ 62.1-241.13. Short title.--This chapter shall be known and may be cited as the Water Project Revenue Bond Act.

§ 62.1-241.14. Findings and purposes.--The General Assembly finds that there exists in the Commonwealth a critical need for the development of water supply facilities in order to implement the goals and purposes of the state water plan. It is the intent of the General Assembly that in order to achieve the economies, efficiencies and protection of natural resources made possible by the proper planning, financing, sizing and location of reservoirs and other water supply facilities which are not practical for any county, city, town or water authority acting alone, and to insure an adequate, reliable, safe, and economical supply of water to the inhabitants of the Commonwealth, the Virginia Resources Authority shall be authorized to develop, finance, construct, own and operate water supply facilities, and to contract for the sale, lease, or use of the water supply facilities, including the sale of water impounded in such facilities, to local governments and other persons in the Commonwealth. Accordingly, the General Assembly determines that the exercise of the powers granted herein is in the public interest, serves an essential public purpose, and will promote the health, safety, welfare, convenience or prosperity of the inhabitants of the Commonwealth. This chapter shall be liberally construed in conformity with these intentions.

§ 62.1-241.15. Definitions.--As used in this chapter, unless the context requires a different meaning:

"Authority" means the Virginia Resources Authority created in Chapter 21 (§ 62.1-197 et seq.) of Title 62.1.

"Board" means the State Water Control Board.

"Bonds" or "revenue bonds" means notes, bonds, bond anticipation notes, or other evidence of indebtedness or obligations of the Authority, issued pursuant to this chapter.

"Cost," as applied to any project financed under the provisions of this chapter, means the total of all costs incurred by the Authority as reasonable and necessary for carrying out all works and undertakings necessary or incident to the accomplishment of any project. It includes, without limitation, all necessary developmental, planning and feasibility studies; surveys, plans and specifications; architectural, engineering, financial, legal or other special services; the cost of acquisition of land and any buildings and improvements thereon, including the discharge of any obligations of the sellers of such land, buildings or improvements; site preparation and development, including demolition or removal of existing

structures; construction and reconstruction; labor, materials, machinery and equipment; the cost of all rights, easements, franchises and permits acquired; financing charges, interest on funds borrowed to finance the project to a date subsequent to the estimated date the project is to be placed in service; necessary expenses incurred in connection with placing the project in service; the funding of accounts and reserves which the Authority may require; and the cost of all other items which the Authority determines to be reasonable and necessary.

"Local government" means any county, city, town, municipal corporation, authority, district, commission or political subdivision created by the General Assembly or pursuant to the Constitution and laws of the Commonwealth or any combination of them.

"Project" means any water supply facility located or to be located in the Commonwealth, all or part of which facility serves or is to serve residents of the Commonwealth. The term includes, without limitation, water supply and intake facilities, water storage facilities, water distribution systems, reservoirs, dams, facilities for the generation or transmission of hydroelectric power that are incident to plants, systems, facilities, or properties used or useful or having the present capacity for future use in connection with the supply or distribution of water, and all properties, rights, easements, and franchises related thereto and deemed necessary or convenient by the Authority for the operation thereof.

§ 62.1-241.16. Additional powers of Authority.--In addition to the powers of the Authority enumerated in § 62.1-203, the Authority is authorized and empowered to:

1. Acquire, purchase, lease as lessee, construct, reconstruct, improve, extend, operate, and maintain any project;

2. Acquire by gift, purchase or the exercise of the right of eminent domain lands or rights in land or water rights in connection therewith; provided that in the exercise of the right of eminent domain, the provisions of Chapter 1.1 (§ 25-46.1 et seq.) of Title 25 shall apply;

3. Issue revenue bonds of the Authority, such bonds to be payable solely from revenues derived from the operation, lease, or sale of a project, including the sale, use or withdrawal of water impounded by a project, and services related thereto;

4. Fix, change, and collect rates, fees, and charges for the use of or for the services furnished by any project and for the sale, use or withdrawal of water impounded by a project, which rates, fees and charges shall be charged to and collected from the person contracting for the same;

5. Enter into contracts with the federal government, the Commonwealth, the District of Columbia, and any adjoining state, or any agency or instrumentality thereof, or with any local government or person, providing for or relating to the furnishing of water services and facilities of any project or in connection with the services and facilities rendered by any project; however, the Authority shall not engage in competition for customers with any local government or waterworks offering or providing similar services; and

6. Make and enter into all contracts or agreements, as the Authority may determine, which are necessary or incidental to the performance of its duties and to the execution of the powers granted by this chapter, on such terms and conditions as the Authority may approve, relating to the sale, lease, or use of a project or an interest therein, including but not limited to the sale, use or withdrawal of water impounded by a project.

§ 62.1-241.17. Contracts made by Authority.--Any contract made and entered into by the Authority pursuant to § 62.1-241.16* shall be subject to such provisions, limitations or conditions as may be contained in the resolution of the Authority authorizing revenue bonds or in the provisions of any trust agreement serving such bonds. Any such contract may provide for the collection of fees, rates or charges for the services, property, and facilities provided by the Authority, and for the enforcement of delinquent charges therefor. The provisions of any such contract and of any resolution or ordinance of a local government enacted pursuant thereto shall be irrevocable so long as any of the revenue bonds issued by the Authority shall be outstanding and unpaid, and the provisions of any such contract, and of any resolution or ordinance enacted pursuant thereto, shall be and be deemed to be for the benefit of such bondholders.

§ 62.1-241.18. Projects to be consistent with state water plan.--The Authority shall not acquire, or develop, construct, any project, or issue any revenue bonds to finance any project, unless the project has been approved by the Board as being consistent with the state water plan as provided in § 62.1-44.36:3**. The consent of the governing body of any local government shall not be required for any such project which has been approved by the Board.

§ 62.1-241.19. Provisions of electrical energy.--The Authority, in connection with its operation of a project involving the impoundment of water, may generate, produce, transmit, deliver, exchange, purchase or sell electric power and energy at wholesale and enter into a contract for such purposes.

§ 62.1-241.20. Condition to the acquisition, construction or development of projects.--A. As a condition precedent to the acquisition, construction or development of any project, or to the issuance of revenue bonds to finance a project, the board of directors of the Authority shall affirmatively find that one or more local governments or other person is willing and able to enter into a contract or contracts with the Authority for the sale, lease, or use of the project, or for the purchase, use or withdrawal of water impounded in the project, on terms that will provide adequate revenues to pay the principal and interest on revenue bonds issued in connection with the project, plus the anticipated costs of maintaining and operating the project.

B. The Authority shall obtain the approval of the Attorney General as to the legality of all contracts pursuant to subsection A.

§ 62.1-241.21. Sale of impounded water.--A. The Authority may sell, allow the use of, or permit the withdrawal of any public water of the Commonwealth that is stored in any impoundment or reservoir acquired, constructed or developed pursuant to this chapter. The price for the water shall be determined by the Authority. The Authority may assess charges for holding water and storage space for use and for actual delivery of water.

B. The Authority shall give local governments a preferential right, but not an exclusive right, to purchase, use or withdraw water impounded by projects.

§ 62.1-241.22. Sale, use or lease of projects.--A. The Authority may sell, license, or lease as lessor, to the extent of its ownership, any project acquired, constructed, or developed pursuant to this chapter. The price of sale of a project shall be the cost of the Authority's interest in the project, plus interest thereon and the costs of operating and maintaining the project from the date of acquisition to the date of sale or transfer, less any payments received by the Authority from any contract for the sale, use or lease of the facility, or the sale, use or withdrawal of water impounded by the project. The purchaser of the Authority's interest in the project shall also assume any and all direct, conditional or contingent liabilities of the Authority attributed to the project in direct relation to the percentage of the project acquired by the purchaser. The Authority shall not sell, license or lease a project unless its board of directors finds that the consideration for the sale, license or lease is fair, just and reasonable and in full compliance with the law.

B. The money received from the sale, license, or lease of a project shall be used to pay the principal of and interest on the revenue bonds issued to finance the cost of the project or to meet contractual obligations incurred by the Authority in connection with the project. When sufficient money has been collected to pay all outstanding revenue bonds and other indebtedness, the project shall be disposed of as provided in § 62.1-241.23*, and the Authority may use any further amounts received from the sale, transfer or lease of the project to provide assistance to local governments for water supply facilities.

C. The Authority shall give local governments a preferential right, but not an exclusive right, to purchase, lease or use projects.

§ 62.1-241.23. Disposition of project upon payment of bonds.--When the revenue bonds issued for any project and the interest thereon and other indebtedness have been paid, the Authority shall convey, transfer, or release its interest in the project to any local governments or other persons who have paid to the Authority the moneys used to retire such indebtedness pursuant to contracts to purchase, use or lease the project, or purchase, use or withdraw water impounded by the project. If more than one local government or other person is entitled to receive an interest in the project, the Authority shall convey the project to such local governments and other persons as tenants in common with each entity receiving a percentage of ownership therein reflecting the payments received from such entity.

§ 62.1-241.24. Powers of local governments, to make grants and conveyances to and contracts with Authority.--Each local government is hereby authorized and empowered to convey or lease to the Authority, with or without consideration, any project, or any right or interest in such facilities or any property appertaining thereto, upon such terms and conditions as the governing body thereof shall determine to be for the best interest of such local government.

§ 62.1-241.25. Grants or loans of public or private funds.--The Authority is authorized to accept, receive, receipt for, disburse, and expend federal and state moneys and other moneys, public or private, made available by grant, loan or otherwise, to accomplish any of the purposes of this chapter. All federal moneys accepted under this section shall be accepted and expended by the Authority upon terms and conditions prescribed by the United States and consistent with state law. All state moneys accepted under this section shall be accepted and expended by the Authority upon terms and conditions prescribed by the Commonwealth.

§ 62.1-241.26. Title to property.--The Authority may acquire title to property in its own name or in the name of the Commonwealth for and on behalf of the Authority. In the event the Authority ceases to operate its projects and to promote the purposes stated in § 62.1-198 or § 62.1-241.14* or is dissolved, the title to real property held by the Authority shall transfer to the Commonwealth and be administered by the Department of General Services; however, in the event that an environmental audit of any real property or interest therein, or portion of such property, to be transferred pursuant to this section, discloses any environmental liability or violation of law or regulation, present or contingent, the Governor may reject the transfer of any portion of such property which he determines to be environmentally defective.

§ 62.1-241.27. Issuance of revenue bonds.--A. The Authority is authorized to provide by resolution of the Board of Directors of the Authority, at one time or from time to time, for the issuance of revenue bonds for the purpose of paying the whole or any part of the cost of a project. The amount of the bonds issued pursuant to this chapter, including any refunding bonds issued pursuant to § 62.1-241.29*, shall not be included in the total of outstanding bonds for purposes of the limit on the amount of the bonds issued by the Authority as provided in § 62.1-204.

B. The principal and interest on revenue bonds shall be paid solely from revenues, fees, and charges derived from the operation, lease, or sale of a project, including the sale, use or withdrawal of water impounded by a project, and services related thereto.

C. The bonds shall bear the date or dates and mature at the time or times that the resolution provides, except that no bond shall mature more than fifty years from its date of issue. The bonds may be in the denominations, be executed in the manner, be payable in the medium of payment, be payable at the place or places and at the time or times, and be subject to redemption or repurchase and contain

such other provisions as may be determined by the Authority prior to their issuance. The bonds may bear interest payable at such time or times and at such rate or rates as determined by the Authority or as determined in such manner as the Authority may provide, including the determination by agents designated by the Authority under guidelines established by it. Bonds may be sold by the Authority at public or private sale at the price or prices that the Authority determines and approves. The Authority may bring action pursuant to Article 6 (§ 15.1-227.52 et seq.) of Chapter 5.1 of Title 15.1 to determine the validity of any issuance or proposed issuance of its bonds under this chapter and the legality and validity of all proceedings previously taken, or proposed in a resolution of the Authority to be taken, for the authorization, issuance, sale and delivery of bonds and for the payment of the principal of and premium, if any, and interest on the bonds.

§ 62.1-241.28. Provisions of resolution or trust indenture authorizing issuance of bonds.--A. Bonds may be secured by a trust indenture between the Authority and a corporate trustee, which may be any bank having the power of a trust company or any trust company within the Commonwealth. A trust indenture may contain provisions for protecting and enforcing the rights and remedies of the bondholders that are reasonable and proper and not in violation of law, and include covenants setting forth the duties of the Authority in relation to the exercise of its powers and the custody, safekeeping and application of all money. The Authority may provide by the trust indenture for the payment of the proceeds of the bonds and all or any part of the revenues of the Authority to the trustee under the trust indenture or to some other depository, and for the method of their disbursement with whatever safeguards and restrictions as the Authority specifies. All expenses incurred in carrying out the trust indenture may be treated as part of the operating expenses of the Authority.

B. Any resolution or trust indenture pursuant to which bonds are issued may contain provisions, which shall be part of the contract or contracts with the holders of such bonds as to:

1. Pledging all or any part of the revenue to be received from the project financed with the proceeds of the bond issue to secure the payment of the bonds;

2. Establishing, regulating and dispersing reserves, sinking funds and other funds and accounts;

3. Limiting the purposes to which the proceeds from the sale of the bonds may be applied, and limiting the pledging of the proceeds to secure the payment of the bonds;

4. Limiting the issuance of additional bonds, the terms on which additional bonds may be issued and secured, and the refunding of outstanding or other bonds;

5. Setting the procedure, if any, by which the terms of any contract with bondholders may be amended or abrogated, the amount of bonds, if any, the holders of which must consent thereto, and the manner in which any consent may be given;

6. Limiting the amount of money to be expended by the Authority for operating expenses of the Authority;

7. Vesting in a trustee or trustees any property, rights, powers and duties in trust that the Authority may determine, and limiting or abrogating the right of bondholders to appoint a trustee or limiting the rights, powers and duties of the trustees;

8. Defining the acts or omissions which shall constitute a default, the obligations or duties of the Authority to the holders of the bonds, and the rights and remedies of the holders of the bonds in the event of default, including as a matter of right the appointment of a receiver; these rights and remedies may include the general laws of the Commonwealth and other provisions of this chapter but shall not provide for the encumbering of any project with a deed of trust or mortgaging of any project;

9. In setting forth covenants, the duties of the Authority in relation to all acquisition, construction, improvement, maintenance, operation, repair, and insurance of the project or projects on account of which such bonds are issued and provisions for the employment of consulting engineers in connection with such construction, reconstruction or operation; and

10. Identifying any other matter, of like or different character, relating to the terms of the bonds or the security or protection of the holders of the bonds.

§ 62.1-241.29. Power to issue refunding bonds.--The Authority shall have the power: (i) to issue bonds to renew or to pay bonds, including the interest, (ii) whenever it deems refunding expedient, to refund any bonds by the issuance of new bonds, whether the bonds to be refunded have or have not matured, and (iii) to issue bonds partly to refund bonds then outstanding and partly for its corporate purposes. The refunding bonds may be exchanged for the bonds to be refunded or they may be sold and the proceeds applied to the purchase, redemption or payment of the bonds to be refunded.

§ 62.1-241.30. Proceeds of bonds.--The proceeds of revenue bonds issued in accordance with the provisions of this chapter shall be used solely for the payment of the cost of the project or projects on account of which such bonds were issued and shall be disbursed in such manner and under such restrictions, if any, as the Authority may provide in the authorizing resolution or in any trust agreement. If the proceeds of such bonds, by error of estimates or otherwise, shall be less than such cost, additional bonds may in like manner be issued to provide the amount of such deficit, and, unless otherwise provided in the authorizing resolution or in the trust agreement securing the same, shall be deemed to be of the same issue and shall be entitled to payment from the same fund without preference or priority of the bonds first issued for the same purpose. If the proceeds of the bonds of any issue shall exceed the amount required for the purpose for which such bonds shall have been issued, the surplus shall be deposited to the credit of the sinking fund for such bonds.

§ 62.1-241.31. Pledge by Authority.--Any pledge made by the Authority shall be valid and binding from the time when the pledge is made. The revenue so pledged and thereafter received by the Authority shall immediately be subject to the lien of such a pledge without any physical delivery thereof or further act. Furthermore, the lien of any such pledge shall be valid and binding as against all parties having claims of any kind in tort, contract or otherwise against the Authority, irrespective of whether the parties have notice of the pledge. No recording or filing of the resolution authorizing the issuance of bonds, the trust indenture securing bonds or any other instrument, including filings under Title 8.9 (§ 8.9-101 et seq.) of the Uniform Commercial Code of Virginia, shall be necessary to create or perfect any pledge or security interest granted by the Authority to secure any bonds.

§ 62.1-241.32. Purchase of bonds by Authority.--The Authority, subject to such agreements with bondholders as may then exist, shall have the power to purchase revenue bonds of the Authority out of any available funds, at any reasonable price. If the bonds are then redeemable, this price shall not exceed the redemption price then applicable plus accrued interest to the next interest payment date.

§ 62.1-241.33. Bonds as negotiable instruments.--Whether or not in the form and character of negotiable instruments, the revenue bonds of the Authority are hereby made negotiable instruments, subject only to provisions of the bonds relating to registration.

§ 62.1-241.34. Validity of signatures of prior members or officers.--In the event that any of the members of the board of directors or any officers of the Authority cease to be members or officers before the delivery of any revenue bonds signed by them, their signatures or authorized substitute signatures shall nevertheless be valid and sufficient for all purposes as if the members or officers had remained in office until delivery.

§ 62.1-241.35. Bondholder protection.--Subsequent amendments to this chapter shall not limit the rights vested in the Authority with respect to any agreements made with, or remedies available to, the holders of revenue bonds issued under this chapter before the enactment of the amendments until the bonds, together with all premiums and interest thereon, and all costs and expenses in connection with any proceeding by or on behalf of the holders, are fully met and discharged.

§ 62.1-241.36. Interim receipts and temporary bonds; bonds mutilated, lost or destroyed.--A. Prior to the preparation of definitive bonds, the authority may, under like restrictions, issue interim receipts or temporary bonds, with or

without coupons, exchangeable for definitive bonds when such bonds have been executed and are available for delivery.

B. Should any bond issued under this chapter become mutilated or be lost or destroyed, the Authority may cause a new bond of like date, number and tenor to be executed and delivered in exchange and substitution for and upon the cancellation of such mutilated bond and its interest coupons, or in lieu of and in substitution for such lost or destroyed bond and its unmatured interest coupons. Such new bond or coupon shall not be executed or delivered until the holder of the mutilated, lost or destroyed bond (i) has paid the reasonable expense and charges in connection therewith (ii) in the case of a lost or destroyed bond, has filed with the Authority evidence satisfactory to the Authority that such bond was lost or destroyed and that the holder was the owner thereof and (iii) has furnished indemnity satisfactory to the Authority.

§ 62.1-241.37. Trust funds.--All fees, charges and revenues received pursuant to the authority of this chapter shall be deemed to be trust funds, to be held and applied solely as provided in this chapter. The resolution or trust agreement providing for the issuance of revenue bonds of the Authority shall provide that any officer to whom, or any bank, trust company or other fiscal agent to which, such moneys shall be paid shall act as trustee of such moneys and shall hold and apply the same for the purposes hereof, subject to such regulations as such resolution or trust agreement may provide.

§ 62.1-241.38. Sinking fund.--The fees, charges and revenues derived from any project subject to revenue bonds issued under the provisions of this chapter, except charges required to pay the cost of maintaining, repairing and operating such projects and to provide fund reserves, shall be set aside in a sinking fund. The sinking fund is pledged to and charged with the payment of (i) the interest upon the bonds as it becomes due, (ii) the principal of the bonds as it becomes due, (iii) the necessary charges of paying agents for paying the interest and principal, and (iv) any premium upon bonds retired by call or purchase as provided in this chapter. The use and disposition of the sinking fund shall be subject to regulations provided in the resolution or the trust indenture. Unless otherwise provided in the resolution or trust indenture, the sinking fund shall be a fund for all such bonds without distinction or priority of one bond over another. Any moneys in the sinking fund in excess of an amount equal to one year's interest on all bonds then outstanding may be applied to the purchase or redemption of bonds.

§ 62.1-241.39. Exemption from taxation.--The Authority shall not be required to pay any taxes or assessments upon any project or any property or upon any operations of the Authority or the income therefrom, or any taxes or assessments upon any project or any property or local obligation acquired or used by the Authority under the provisions of this chapter or upon the income therefrom. Any revenue bonds issued by the Authority under the provisions of this chapter, the

transfer thereof and the income therefrom, including any profit on the sale thereof, shall at all times be free from taxation and assessment of every kind by the Commonwealth and by the local governments and other political subdivisions of the Commonwealth.

§ 62.1-241.40. Bonds as legal investments and securities.--The revenue bonds issued by the Authority in accordance with the provisions of this chapter are declared to be legal investments in which all public officers or public bodies of the Commonwealth, its political subdivisions, all municipalities and municipal subdivisions; all insurance companies and associations and other persons carrying on insurance business; all banks, bankers, banking associations, trust companies, savings banks, savings associations, including savings and loan associations, building and loan associations, investment companies, and other persons carrying on a banking business; all administrators, guardians, executors, trustees and other fiduciaries; and all other persons who are now or may hereafter be authorized to invest in bonds or other obligations of the Commonwealth, may invest funds, including capital, in their control or belonging to them. The bonds of the Authority are also hereby made securities which may be deposited with and received by all public officers and bodies of the Commonwealth or any agency or political subdivision of the Commonwealth and all municipalities and public corporations for any purpose for which the deposit of bonds or other obligations of the Commonwealth is now or may later be authorized by law.

§ 62.1-241.41. Deposit of money; expenditures; security for deposits.--A.All money of the Authority, except as otherwise authorized by law or provided in this chapter, shall be deposited in an account or accounts in banks or trust companies organized under the laws of the Commonwealth or in national banking associations located in Virginia or in savings and loan associations located in Virginia organized under the laws of the Commonwealth or the United States. The money in these accounts shall be paid by check signed by the Executive Director or other officers or employees and designated by the Authority. All deposits of money shall, if required by the Authority, be secured in a manner determined by the Authority to be prudent, and all banks, trust companies and savings and loan associations are authorized to give security for the deposits.

B. Notwithstanding the provisions of subsection A, the Authority shall have the power to contract with the holders of any of its bonds as to the custody, collection, securing, investment and payment of any money of the Authority and of any money held in trust or otherwise for the payment of bonds and to carry out such a contract. Money held in trust or otherwise for the payment of bonds or in any way to secure bonds and deposits of money may be secured in the same manner as money of the Authority, and all banks and trust companies are authorized to give security for the deposits.

C. Subject to the provisions of subsection B hereof, funds of the Authority not needed for immediate use or disbursement, including any funds held in reserve,

may be invested in (i) obligations or securities which are considered lawful investments for fiduciaries, both individual and corporate, as set forth in § 26-40; (ii) bankers' acceptances; or (iii) repurchase agreements, reverse repurchase agreements, rate guarantee or investment agreements or other similar banking arrangements.

§ 62.1-241.42. Enforcement of charges.--Any resolution or trust agreement providing for the issuance of revenue bonds under the provisions of this chapter may include any or all of the following provisions, and may require the Authority to adopt such resolutions or to take such other lawful action as shall be necessary to effectuate such provisions, and the Authority is hereby authorized to adopt such resolutions and to take such other action:

1. That the Authority may require the local government or other person who is obligated to pay rates, fees or charges for water or the use of or for the services furnished by any project acquired or constructed by the Authority under the provisions of this chapter, to make a reasonable deposit with the authority in advance to insure the payment of such rates, fees or charges and to be subject to application to the payment thereof if and when delinquent.

2. That, if any rates, fees or charges for water or the use of and for the services furnished by any project acquired or constructed by the Authority under the provisions of this chapter shall not be paid within thirty days after the same shall become due and payable, the Authority may at the expiration of such thirty-day period suspend services and the Authority may proceed to recover the amount of any such delinquent rates, fees or charges, with interest, in a civil action.

3. That the water supply to or for any local government or other person shall not be shut off or stopped under the provisions of this section, if the State Health Commissioner, upon application of the local board of health or health officer of the county, city or town wherein such water is supplied, shall have found and shall certify to the Authority that ceasing to supply or shutting off such water supply will endanger the health of such person and the health of others in such county, city or town.

§ 62.1-241.43. Credit of Commonwealth and Authority not pledged.--Revenue bonds issued by the Authority under the chapter shall not constitute a debt or a pledge of the faith and credit of the Commonwealth or any political subdivision thereof, including but not limited to the Authority, but shall be payable solely from the funds herein provided for the revenues, fees and charges derived from the operation, lease, or sale of a project, as provided in this chapter. No member of the board of directors or officer, employee or agent of the Authority or any person executing bonds of the Authority shall be liable personally on the bonds by reason of their issuance or execution. Each bond issued under this chapter shall contain on its face a statement to the effect (i) that neither the Commonwealth, nor any political subdivision thereof, nor the Authority shall be obligated to pay the principal of, or interest or premiums on, the bond or other costs incident to the bond

except from the revenue pledged and (ii) that neither the faith and credit nor the taxing power of the Commonwealth, or any political subdivision thereof, is pledged to the payment of the principal of or interest or premiums on the bond.

**Development Option 2:
State Water Control Board**

**Chapter 25
Water Project Development**

§ 62.1-271. Definitions.--As used in this chapter, unless the context requires otherwise:

"Board" means the State Water Control Board.

"Cost," as applied to any project to be acquired by purchase or by condemnation, includes the purchase price or the amount of the award; cost of improvements; financing charges; interest during any period of disuse before completion of improvements; costs of engineering and legal expenses, plans, specifications and surveys; estimates of costs and of revenues; other expenses necessary or incident to determining the feasibility or practicability of the project; administrative expenses; and such other expenses as may be necessary or incident to the financing and the acquisition of the project and the placing of the project in operation. With respect to any project to be constructed, the term also embraces the costs of construction; the costs of all lands, property rights, easements, and franchises acquired which are deemed necessary for such construction; the costs of all machinery and equipment; and such other expenses as may be necessary or incident to the construction of the project and the condemnation of property necessary for such construction and operation. The cost of a project also includes any payments required to be made to a county, city, or town pursuant to an agreement entered into pursuant to subsection B of § 62.1-274*.

"Local government" means any county, city, town, municipal corporation, authority, district, commission, or political subdivision created by the General Assembly or pursuant to the Constitution and laws of the Commonwealth or any combination of them.

"Project" means the acquisition of real property for water reservoirs; the construction and reconstruction or improvement of water reservoirs; the acquisition of real property surrounding water reservoirs; the acquisition of real property for mitigation of any alteration of water resources by the construction of a water reservoir; and all necessary and appropriate water facilities useful for obtaining one or more sources of water supply, the treatment of water, and the distribution and sale of water to users and consumers, including local governments for the purpose of resale, and the operation, maintenance, additions, improvements, and extensions of such facilities so as to assure an adequate water utility system deemed by the Board to be necessary or appropriate for the efficient operation of the project, all for

the essential public purpose of providing water facilities and services to meet public health and environmental standards and to aid in the development of trade, commerce, industry, agriculture, and employment opportunities in the Commonwealth.

"Water facilities" means any projects, structures, and other real or personal property acquired, rehabilitated, constructed, or planned for the purposes of supplying, distributing, and treating water and diverting, channeling, or controlling water flow and head, including but not limited to, surface or ground water, canals, reservoirs, channels, basins, dams, aqueducts, conduits, pipelines, mains, pumping stations, water distribution systems, intake stations, wells, purification or filtration plants or other treatment plants or works, connections, water meters, mechanical equipment, electric-generating equipment, and other plant structures, equipment, or property or rights therein and appurtenances thereto necessary or useful and convenient for the collection, conveyance, distribution, pumping, treatment, storing or disposing of water.

62.1-272. Powers of Board.--The Board may, subject to the provisions of this chapter:

1. Acquire by purchase or by condemnation, construct, equip, expand, improve, operate, and maintain one or more projects, in whole or in part, directly or under contract with others;

2. Issue revenue bonds of the Commonwealth, to be known and designated as "Commonwealth of Virginia Water Supply Revenue Bonds," payable from revenues received pursuant to contracts with a local government for the sale of water or the provision of water management services and from any other available sources of funds, to pay the cost of projects;

3. Establish, charge, and collect fees and charges for the use of projects, including the sale of water impounded in a project to local governments and other persons;

4. Receive and accept from any agency or instrumentality of the United States, or other public or private body, contributions of money or property or other things of value, to be held, used or applied for the purposes of this chapter;

5. Make and enter into all contracts or agreements necessary or incidental to the execution of its powers under this chapter, including contracts or agreements for the sale, on the behalf of the Commonwealth, of water impounded in any project to local governments and other persons;

6. Enter into or obtain contracts or policies of insurance, letters of credit or other agreements to secure payment of the bonds authorized to be issued pursuant to this chapter; and

7. Establish the terms and conditions upon which any lessee, sublessee, licensee, user, franchisee, or purchaser shall be authorized to use a project or the water impounded thereby as the Board may deem necessary or appropriate.

§ 62.1-273. Condemnation of projects and property.--A. The Board, whenever a reasonable price cannot be agreed upon or whenever the owner is legally incapacitated or is absent or unable to convey valid title or is unknown, may acquire by condemnation any lands, rights, easements, franchises and other property deemed necessary or convenient for the improvement or the efficient operation of any project acquired or constructed under this chapter, or for the purpose of constructing any project or portions thereof. Such condemnation proceedings shall be conducted, and the compensation to be paid shall be ascertained and paid in the manner provided by the Virginia General Condemnation Act (§ 25-46.1 et seq.).

B. Title to any property condemned by the Board shall be taken in the name of the Commonwealth. The Commonwealth shall be under no obligation to accept and pay for any property condemned or any cost incidental to any condemnation proceedings and shall, in no event, pay for the same except from the funds provided by this chapter; in any condemnation proceedings, the court having jurisdiction of the suit, action or proceeding may make such orders as may be just to the Commonwealth and to the owners of the property to be condemned and may require an undertaking or other security to secure such owners against any loss of damage to be sustained by reason of the failure of the Commonwealth to accept and pay for the property, but such undertaking or security shall impose no liability upon the Commonwealth, except such as may be paid from the funds provided under the authority of this chapter. However, condemnation shall not lie in any case when the Commonwealth, in granting a franchise to any project named herein, has stipulated the terms upon which it may acquire such project.

§ 62.1-274. Conditions to the acquisition, construction and development of projects.--A. As a condition precedent to the acquisition, construction or development of any project, the Board shall determine that such acquisition, construction or development is consistent with, and contemplated by, the state water plan pursuant to § 62.1-44.36:3**.

B. As a condition precedent to the acquisition of real property for a project, by condemnation or purchase, the Board shall enter into an agreement with any city, county, or town which will have real property removed from, or converted to tax-exempt status in, its property tax base as a result of the acquisition. Each such agreement shall provide that in each year following the removal of the property from the tax rolls, the Board shall make payments in lieu of ad valorem taxes to the affected county, city or town with respect to the real property removed from, or converted to tax-exempt status in, its property tax base. The amount of payments to be made in each year shall be determined by applying the local government's ad valorem tax rate for that year to the assessed value of the affected real property, which value shall be based on its assessed value for the year prior to the date of the agreement, and shall be increased or decreased from year to year as the value of other property having the same type and use as that of the property when removed from the tax rolls. Payments under any agreement shall be made from funds

collected pursuant to § 62.1-281* to the extent such funds are available after making scheduled payments of principal and interest on any bonds issued for the project. Deficiencies in payments shall accrue from year to year until paid, together with interest as provided by law.

C. As a condition precedent to the acquisition, construction or development of a project to be financed by the issuance of revenue bonds pursuant to this chapter, the Board shall have entered into one or more contracts, leases, or agreements with local governments or other persons providing for the payment to the Board for the use of project or water facilities including the sale of water impounded in a project. The rentals, fees, prices and other charges shall be fixed and adjusted in respect to the aggregate thereof from a project or any part thereof so as to be reasonably expected to provide a fund sufficient with other revenues of the project to pay the required installments of principal and interest on the bonds issued for the project; the cost of maintaining, repairing, and operating the project, including a reserve for extraordinary repairs and insurance; and any other payments due to any local government pursuant to subsection B.

§ 62.1-275. Revenue bonds.--The Board may provide by resolution, at one time or from time to time, for the issuance of revenue bonds of the Commonwealth for the purpose of paying all or any part of the cost of any one or more projects. All bonds shall be issued and sold through the Treasury Board, whose approval of each of the determinations and designations specified in § 62.1-277* shall be required.

§ 62.1-276. Credit of Commonwealth not pledged.--Commonwealth of Virginia Water Supply Revenue Bonds issued under the provisions of this chapter shall not be deemed to constitute a debt of the Commonwealth of Virginia or a pledge of the faith and credit of the Commonwealth, but such bonds shall be payable solely from the funds herein provided therefor from fees and charges, from bond proceeds or earnings thereon and from any other available sources of funds. All such bonds shall state on their face that the Commonwealth of Virginia is not obligated to pay the same or the interest thereon except from fees and charges under this chapter, from bond proceeds or earnings thereon and from any other available sources of funds, and that the faith and credit of the Commonwealth are not pledged to the payment of the principal or interest of such bonds. The issuance of such revenue bonds under the provisions of this chapter shall not directly or indirectly or contingently obligate the Commonwealth to levy or to pledge any form of taxation whatever therefor or to make any appropriation for their payment, other than appropriate available funds derived as revenues from fees and charges under this chapter or derived from bond proceeds or earnings thereon and from any other available sources of funds.

§ 62.1-277. Form and terms of bonds.--A. The revenue bonds shall be dated, shall bear interest at such rate or rates, and shall mature at such time or times, not exceeding fifty years from their date or dates, as may be determined by the Board,

and may be made redeemable before maturity, at the option of the Board, at such price or prices and under such terms and conditions as may be fixed by the Board prior to the issuance of the bonds. The principal and interest of such bonds may be made payable in any lawful medium.

B. The payments of principal and interest may be uniform in amount over the life of the bond; however, such uniformity shall not be a prerequisite to the issuance of such bonds. The Board shall determine the form of the bonds, including any interest coupons to be attached thereto, and shall fix the denomination or denominations of the bonds and the place or places of payment of principal and interest thereof, which may be at any bank or trust company within or without the Commonwealth. The bonds shall be signed by the chairman of the Board and the State Treasurer and shall bear the lesser seal of the Commonwealth or a facsimile thereof, and any attached coupons shall bear the facsimile signature of the chairman of the Board. The bonds may be executed with the facsimile signature of the chairman of the Board and the State Treasurer, in which case the bonds shall be authenticated by a corporate trustee or other authenticating agent approved by the Board. If any officer whose signature appears on the bonds or coupons ceases to be such officer before delivery of the bonds, the signature shall nevertheless be valid and sufficient for all purposes.

C. All revenue bonds issued under the provisions of this chapter shall have all the qualities and incidents of negotiable instruments under the negotiable instruments law of the Commonwealth. Such bonds and the income therefrom shall be exempt from all taxation within the Commonwealth.

D. The bonds may be issued in coupon or in registered form, or both, as the Board may determine, and provision may be made for the registration of any coupon bond as to both principal and interest, and for the reconversion of any bonds registered as to both principal and interest into coupon bonds.

§ 62.1-278. No other prerequisites to issuance of bonds.--Such revenue bonds may be issued without any other proceedings or the happening of any other conditions or things than those proceedings, conditions, and things which are specified and required by this chapter.

§ 62.1-279. Sale and proceeds of revenue bonds; additional or temporary bonds.--A. The Treasury Board as agent for the Board may sell revenue bonds at a private or public sale for such price and in the manner it determines to be in the best interests of the Commonwealth.

B. The proceeds of the bonds shall be used solely for the payment of the cost of the project or projects for which they are issued, and shall be disbursed by the Board.

C. If the proceeds of the bonds of any issue are less than the cost of the project or projects for which the bonds were issued, additional bonds may be issued to provide the amount of the deficit. Unless otherwise provided in the resolution authorizing the issuance of the bonds or in the trust indenture described in this

chapter, the additional bonds shall be deemed to be of the same issue and shall be entitled to payment without preference or priority of the bonds first issued for the project or projects.

D. If the proceeds of any bonds issued to pay the cost of projects exceed the facilities' cost, the surplus shall be applied to the payment of principal and interest of the bonds.

E. Prior to the preparation of definitive bonds, temporary bonds may be issued, under similar restrictions, with or without coupons, exchangeable for subsequently issued definitive bonds.

F. The Director may replace any bond which is mutilated, destroyed or lost.

§ 62.1-280. Trust indenture; provisions applicable to bond resolution.--

A. Any issue of revenue bonds may be secured by a trust indenture by and between the Board, in the name of the Commonwealth, and a corporate trustee, which may be any trust company or bank having the powers of a trust company. The trust indenture may pledge fees and charges to be received from the use of and for the services rendered by any project to be acquired or constructed from the proceeds of such revenue bonds, but no trust indenture shall convey or mortgage any project or any part thereof.

B. Either the resolution providing for the issuance of revenue bonds or the trust indenture may contain provisions for protecting and enforcing the rights and remedies of the bondholders as may be reasonable and proper and not in violation of law, including covenants setting forth the duties of the Board in relation to the acquisition, construction, improvement, maintenance, operation, repair and insurance of such projects, and the custody, safeguarding and application of all moneys. The trust indenture may also provide that projects shall be acquired, constructed, enlarged or improved, and paid for under the supervision and approval of consulting engineers employed or designated by the Board, in the name of the Commonwealth, and satisfactory to the original purchasers of the bonds issued. The trust indenture may further require that the security given by contractors and by any depository of the proceeds of the bonds or revenues of the projects or other moneys pertaining to the projects be satisfactory to the purchasers. It shall be lawful for any bank or trust company incorporated under the laws of this Commonwealth to act as depository and to furnish indemnifying bonds or to pledge securities required by the Board. Such indenture may set forth the rights and remedies of the bondholders and of the trustee, and may restrict the individual right of action of bondholders as is customary in trust indentures securing bonds and debentures of corporations.

C. In addition, the indenture may contain other provisions that the Board deems reasonable and proper for the security of the bondholders.

§ 62.1-281. Fees and charges.--The Board shall establish and collect fees and charges for the use of projects, including the sale of impounded water to any local government or other person. These revenues shall be pledged to pay the principal

of and the interest on revenue bonds issued under the provisions of this chapter. The fees and charges shall be established and adjusted in respect of the aggregate fees and charges for the projects; the revenues of which shall have been pledged to provide a fund sufficient to (i) pay the cost of maintaining, repairing and operating the projects unless such cost is otherwise provided for, (ii) pay the bonds and the interest thereon as the bonds become due and (iii) provide reasonable reserves for such purposes. Such fees and charges shall not be subject to supervision or regulation by any other state commission, board, bureau or agency.

§ 62.1-282. Sinking fund.--The fees, charges and revenues derived from any project subject to revenue bonds issued under the provisions of this chapter, except charges required to pay the cost of maintaining, repairing and operating such projects and to provide fund reserves, shall be set aside in a sinking fund. The sinking fund is pledged to and charged with the payment of (i) the interest upon the bonds as it becomes due, (ii) the principal of the bonds as it becomes due, (iii) the necessary charges of paying agents for paying the interest and principal, and (iv) any premium upon bonds retired by call or purchase as provided in this chapter. The use and disposition of the sinking fund shall be subject to regulations provided in the resolution or the trust indenture. Unless otherwise provided in the resolution or trust indenture, the sinking fund shall be a fund for all such bonds without distinction or priority of one bond over another. Any moneys in the sinking fund in excess of an amount equal to one year's interest on all bonds then outstanding may be applied to the purchase or redemption of bonds.

§ 62.1-283. Remedies of bondholders and trustees.--Any holder of revenue bonds or attached coupons issued under the provisions of this chapter and any trustee under the trust indenture may protect and enforce all rights granted under the laws of the Commonwealth or under the resolution or trust indenture, and may enforce all duties required by this chapter, or by the resolution or trust indenture, to be performed by the Board, including the establishing, charging and collecting of fees and charges for the use of projects.

§ 62.1-284. All moneys received to be trust funds; disbursements.--A. All moneys received pursuant to the authority of this chapter, whether as proceeds from the sale of revenue bonds, as grants or other contributions, or as revenues from any project, shall be held and applied solely as provided in this chapter. The Board shall, in the resolution or the trust indenture, provide for the payment of the proceeds of the sale of the bonds and the revenues to be received into the state treasury and carried on the books of the Comptroller in a special account. The Board may provide for the turning over, transfer or paying over of such funds from the state treasury to any officer, agency, bank or trust company, who shall act as trustee of the funds, and hold and apply the fees for the purposes of this chapter subject to such regulation as this chapter and the resolution or trust indenture may provide.

B. All moneys paid into the state treasury pursuant to the provisions of this chapter are hereby appropriated to the Board for the purpose of carrying out the provisions of this chapter. Disbursements and payments of moneys so paid into the state treasury shall be made by the State Treasurer upon warrants of the State Comptroller which he shall issue upon vouchers signed by the chairman of the Board or his designee.

§ 62.1-285. Revenue refunding bonds.--The Board is authorized to provide for the issuance of revenue refunding bonds of the Commonwealth, subject to the applicable provisions of this chapter, for the purpose of refunding any revenue bonds issued under the provisions of this chapter and then outstanding, including any redemption premium on the bonds.

§ 62.1-286. Bonds declared legal and authorized investments.--The bonds issued pursuant to this chapter shall be legal and authorized investments for banks, savings banks, trust companies, building and loan associations, insurance companies, fiduciaries, trustees, and guardians and for all public funds of the Commonwealth or other political subdivisions of the Commonwealth. Such bonds shall be eligible to secure the deposit of public funds of the Commonwealth and public funds of counties, cities, towns, school districts or other political subdivisions of the Commonwealth. In addition, the bonds shall be lawful and sufficient security for deposits to the extent of their value when accompanied by all unmatured coupons.

§ 62.1-287. Financing of two or more projects together.--The Board may, in its discretion, couple or unite into one unit for financing purposes any two or more projects, and revenue bonds of a single issue may be issued for the purpose of paying the cost of any one or more projects.

§ 62.1-288. Use of projects upon payment of bonds.--A. When the particular revenue bonds issued for any project or projects and the interest thereon have been paid, or a sufficient amount has been provided for their payment and continues to be held for that purpose, while a contract providing for the use of the project or water facilities, including the sale of impounded water to a local government or other person, remains in effect, the Board shall continue to establish, charge and collect fees and charges for the use of the projects, including the sale of impounded water. Such fees and charges shall be applied as required for maintaining, repairing, operating, improving, and reconstructing such project or projects, and any surplus fees and charges shall be applied to such purpose as the Board deems necessary or appropriate for the provision of water facilities and services to meet public health and environmental standards and to aid in the development of trade, commerce, industry, agriculture and employment opportunities in the Commonwealth.

B. Upon the payment of the particular revenue bonds for a project or projects, and the expiration of a contract providing for the use of the project or water facilities including the sale of water impounded in a project to a local government or other person, the Board may, in its discretion, (i) sell or lease the project to the local government or other person on such terms and conditions as the Board deems appropriate; (ii) enter into contracts or agreements for the use of the project, including the sale of water impounded in the project, with any local government or other person, on such terms and conditions as the board deems appropriate; or (iii) take such other action with respect to the project and any water impounded therein as the Board deems necessary or appropriate for the provision of water facilities and services to meet public health and environmental standards and to aid in the development of trade, commerce, industry, agriculture and employment opportunities in the Commonwealth.

§ 62.1-289. Miscellaneous funds collected by Board.--Notwithstanding any other provision of law, the Board is authorized to retain all miscellaneous funds generated by the operation of the projects for use in the operation and maintenance of those projects. Any such funds not expended for this purpose in the fiscal year in which they are generated shall be deposited in the treasury of the Commonwealth.

§ 62.1-290. Failure of local governments to collect and remit amounts due.--If a local government fails to collect and remit in full all amounts due to the Board under any contract, lease or agreement pursuant to subsection C of § 62.1-274*, the Board shall notify the State Treasurer, who shall withhold all funds of the Commonwealth and all funds administered by the Commonwealth, its agencies, boards and instrumentalities allotted to such local government until such local government has collected and remitted in full all sums due and cured or remedied all defaults. This section shall not mandate the withholding of funds allocated to a local government which would violate contracts to which the Commonwealth is a party, the requirements of federal law imposed on the Commonwealth, or judgments of any court binding on the Commonwealth.

§ 62.1-291. Liberal construction of chapter.--The provisions of this chapter shall be liberally construed to the end that its beneficial purposes may be effectuated. Insofar as the provisions of this chapter are inconsistent with the provisions of any other law, general, special or local, the provisions of this chapter shall be controlling.

**Development Option 3:
Funding the Revolving Fund**

**Chapter 23.
Virginia Water Supply Revolving Fund.**

§ 62.1-233. **Definitions.**--As used in this chapter, unless a different meaning clearly appears from the context:

"*Authority*" means the Virginia Resources Authority created in Chapter 21 (§ 62.1-197 et seq.) of this title.

"*Board*" means the ~~Board of Health~~ State Water Control Board.

"Community waterworks" means a system that serves piped water for drinking or domestic use to at least fifteen service connections or that serves twenty-five or more year-round residents.

"*Cost*," as applied to any project financed under the provisions of this chapter, means the total of all costs incurred by the local government as reasonable and necessary for carrying out all works and undertakings necessary or incident to the accomplishment of any project. It includes, without limitation, all necessary developmental, planning and feasibility studies, surveys, plans and specifications, architectural, engineering, financial, legal or other special services, the cost of acquisition of land and any buildings and improvements thereon, including the discharge of any obligations of the sellers of such land, buildings or improvements, site preparation and development, including demolition or removal of existing structures, construction and reconstruction, labor, materials, machinery and equipment, the reasonable costs of financing incurred by the local government in the course of the development of the project, carrying charges incurred before placing the project in service, interest on funds borrowed to finance the project to a date subsequent to the estimated date the project is to be placed in service, necessary expenses incurred in connection with placing the project in service, the funding of accounts and reserves which the Authority may require and the cost of other items which the Authority determines to be reasonable and necessary.

"*Fund*" means the Virginia Water Supply Revolving Fund created by this chapter.

"*Local government*" means any county, city, town, municipal corporation, authority, district, commission or political subdivision created by the General Assembly or pursuant to the Constitution or laws of the Commonwealth or any combination of any two or more of the foregoing.

"*Project*" means any water supply facility which serves primarily residents of the Commonwealth or which is located or to be located in the Commonwealth by any local government. The term includes, without limitation, water supply and intake facilities; water treatment and filtration facilities; water storage facilities; water distribution facilities; related office, administrative, storage, maintenance and laboratory facilities; and interests in land related thereto.

"Owner" means an individual, group of individuals, partnership, firm, association, institution, corporation, government entity or the federal government, which supplies water to any person within this Commonwealth from or by means of any community waterworks.

"Water production" or "water produced" means the quantity or quantity per capita of water supplied during a given time period for a variety of needs or purposes, including any wasted, lost, or otherwise unaccounted for quantity.

"Water supply" means water taken into a community waterworks from wells, streams, springs, lakes, reservoirs, impoundments and other bodies of surface or ground water, but does not include any water above the point of intake of a surface water source.

"Water supply facility charge" or "charge" means the fee assessed pursuant to § 62.1-234.1*.

§ 62.1-234. Creation and management of Fund.--There shall be set apart as a permanent and perpetual fund, to be known as the "Virginia Water Supply Revolving Fund," all sums appropriated to the Fund by the General Assembly, all receipts by the Fund from loans made by it to local governments, all moneys collected pursuant to the water supply facility charge pursuant to § 62.1-234.1*, all income from the investment of moneys held in the Fund, and any other sums designated for deposit to the Fund from any source public or private. The Fund shall be administered and managed by the Authority as prescribed in this chapter, subject to the right of the Board, following consultation with the Authority, to direct the distribution of loans or grants from the Fund to particular local governments and to establish the interest rates and repayment terms of such loans as provided in this chapter. In order to carry out the administration and management of the Fund, the Authority is granted the power to employ officers, employees, agents, advisers and consultants, including, without limitation, attorneys, financial advisers, engineers and other technical advisers and public accountants and, the provisions of any other law to the contrary notwithstanding, to determine their duties and compensation without the approval of any other agency or instrumentality. The Authority may disburse from the Fund its reasonable costs and expenses incurred in the administration and management of the Fund and a reasonable fee to be approved by the Board for its management services.

§ 62.1-234.1. Water supply facility charge.--A. In order to assure the ability of the Commonwealth to provide safe and ample supplies of water for its residents, a charge shall be imposed upon the owner of a community waterworks at the rate of _____ cents per 1,000 gallons of water produced.³⁷

B. The water supply facility charge shall be paid quarterly by the owner, and shall be submitted to the Authority to the credit of the Fund not later than thirty days following the end of each quarter. Any owner who fails to pay the charge within the required time shall automatically be assessed a penalty of five percent of

³⁷ The rate is intentionally left blank for further discussion.

the unpaid balance. Thereafter, the charge and penalty shall bear interest at the rate of one percent per month until paid.

C. Owners shall maintain records showing the amount of water produced and the extent to which the charge has been included in the rates paid by the consumers of the water. Such records shall be made available to the Authority upon request.

§ 62.1-237. Collection of money due Fund.-- The Authority is empowered to collect, or to authorize others to collect on its behalf, charges due to the Fund, or amounts due to the Fund under any loan to a local government, including, if appropriate, taking the action required by § 15.1-227.61 to obtain payment of any amounts in default. Proceedings to recover charges or other amounts due to the Fund may be instituted by the Authority in the name of the Fund in the appropriate circuit court.

§ 62.1-239.1. Loans Criteria for approval of loans and grants for regional projects, etc.--In approving loans and grants, the Board shall give preference to loans and grants for projects that will based on the following criteria: (i) utilize the use of private industry in operation and maintenance of such projects where a material savings in cost can be shown over public operation and maintenance or; (ii) serve two or more local governments to encourage the extent to which the project encourages regional cooperation or (iii) both; (iii) the applicant's ability to finance the project through other sources of funding; (iv) the ability of an applicant for a loan to repay the loan; (v) the applicant's preparation of a water conservation plan for the more efficient use of existing water supply facilities; and (vi) the extent to which the development of a project is consistent with the state water plan as set forth in § 62.1-44.36:3**. The Board shall conduct a public hearing prior to approving any application for a loan or grant. No loan or grant under this chapter shall be approved unless the project for which financing is sought is included in the "approved plan for the area."

Option 4: Tying the Development to a State Plan

§ 15.1-37. Construction of dams, etc., for purpose of providing public water supply; approval by governing body of political subdivision.--The governing body of every county and town is authorized to make expenditures from the county or town general fund in order to acquire land, participate in the construction of dams and perform all other necessary acts for the purpose of providing sources of public water supply for agricultural, residential, governmental and industrial development of the county or town, if the dam has been approved by the State Water Control Board as being consistent with the state water plan pursuant to § 62.1-44.36:3**; provided, however, such dam shall not be constructed

nor any land acquired therefor when the dam would be located in another political subdivision without the approval of such political subdivision's governing body; provided, further, that no such approval shall be required where such dam is in the process of construction, or for which the site has been purchased, or for which plans for construction have been filed with any appropriate agency of the federal, state, or local government on or before July 1, 1976.

In any case in which the approval by such political subdivision's governing body is withheld the party seeking such approval may petition for the convening of a special court, pursuant to §§ 15.1-37.1:1 through 15.1-37.1:7 of the Code of Virginia

§ 15.1-37.1. Certain counties, cities and towns may construct dams across navigable streams; permission from Chief of Engineers, Secretary of Army and State Attorney General; approval of governing body.--Any county, city or town authorized by its charter or by general law to construct a dam in connection with its public water supply system and which has secured permission from the Chief of Engineers and the Secretary of the Army and authorization of the Attorney General of Virginia with the consent and approval of the Governor, and has obtained the approval of the State Water Control Board for the construction of the dam pursuant to § 62.1-44.36:3**, is hereby authorized and granted the right to construct such dam in and across the bed of any navigable river, stream or tributary in this Commonwealth; provided, however, such dam shall not be constructed nor any land acquired therefor when the dam would be located in another political subdivision without the approval of such political subdivision's governing body; provided, further, that no such approval shall be required where such dam is in the process of construction, or for which the site has been purchased or for which plans for construction have been filed with any appropriate agency of the federal, state, or local government on or before July 1, 1976.

In any case in which the approval by such political subdivision's governing body is withheld the party seeking such approval may petition the Chief Justice of the Supreme Court of Virginia for the convening of a special court, pursuant to §§ 15.1-37.1:1 through 15.1-37.1:7 of the Code of Virginia.

§ 15.1-37.1:2. Same; powers of special court; rules of decision; order controlling subsequent conduct of case.--A. The court, in making its decision, shall balance the equities in the case, and shall enter an order setting forth what it deems fair and reasonable terms and conditions, and shall direct the land acquisition to be in conformity therewith. It shall have power:

A-1. To determine the metes and bounds of the land to be acquired, and may include a greater or smaller area than that described in the petition;

B-2. To require the payment by the acquiring party of a sum to be determined by the special court, payable on the effective date of acquisition, and to provide for compensation for the value of any improvements also acquired;

~~C-3.~~ To limit the number of expert witnesses, as well as require each expert witness who will testify to file a statement of his qualifications;

~~D-4.~~ To take other action as may aid in the disposition of the case.

B. The special court shall not approve the acquisition of land unless the State Water Control Board has determined that the action is consistent with the state water plan as provided in § 62.1-44.36:3**. The special court shall make an appropriate order which will control the subsequent conduct of the case unless modified before or at the trial or hearing to prevent manifest injustice.

§ 15.1-37.1:3. Same; hearing and decision.--A. The special court shall hear the case upon the evidence introduced as evidence is introduced in civil cases.

B. The special court shall determine the necessity for and expediency of the acquisition of land or other proposed action and the best interests of the parties.

C. If a majority of the special court is of the opinion that the proposed action is not necessary or expedient, or that the proposed action has not been found by the State Water Control Board to be consistent with the state water plan as provided in § 62.1-44.36:3**, the petition shall be dismissed. If a majority of the court is satisfied of the necessity for and expediency of the proposed action, it shall determine the terms and conditions of the action and shall enter an order granting the petition. In all contested cases, the special court shall render a written opinion. The order granting the petition shall set forth in detail all such terms and conditions upon which the petition is granted.

§ 15.1-332.1. Approval necessary for impoundment of waters.--A. Notwithstanding any provisions to the contrary in Articles 6 (§ 15.1-332.1 et seq.), 7 (§ 15.1-341 et seq.) and 8 (§ 15.1-349 et seq.) of this chapter after July 1, 1976, no county or municipality shall impound any waters in the Commonwealth within the boundaries of another county or municipality without first obtaining the approval of such county or municipality to such proposed impoundment of waters; provided, however, no such approval shall be required where an impoundment for such waters is in existence, or in the process of construction, or for which the site has been purchased, or for which plans for construction have been filed with any appropriate agency of the federal, State, or local government on or before July 1, 1976.

In any case in which the approval by such political subdivision's governing body is withheld the party seeking such approval may petition for the convening of a special court, pursuant to §§ 15.1-37.1:1 through 15.1-37.1:7. of the Code of Virginia.

B. After July 1, 1994, no county or municipality shall impound any waters in the Commonwealth within the boundaries of another county or municipality unless the State Water Control Board has approved such impoundment as being consistent with the state water plan pursuant to § 62.1-44.36:3**.

§ 15.1-341. Notice to governing body and State Board of Health and State Water Control Board required prior to construction.--A. Any person, firm, corporation, including municipal corporations, or association who or which proposes to establish a water supply consisting of a well, springs, or other source and the necessary pipes, conduits, mains, pumping stations, and other facilities in connection therewith, to serve or to be capable of serving three or more connections shall notify the State Board of Health, notify the State Water Control Board, and shall notify in writing the governing body of the county in which such water system is to be located and shall appear at a regular meeting thereof and notify such governing body in person.

B. In any county having a population of more than 60,000 or adjoining a city having a population of 200,000 or more no extension of an existing system for the purpose of serving three or more connections shall be made by any person, firm or corporation other than a municipal corporation until a plan of such proposed extension, with proof of capacity to serve, has been filed with, and permit for such extension has been obtained from the sanitation engineer or other county official, if any, designated therefor by the board of supervisors.

§ 15.1-1250.1. Approval for certain water supply impoundment facilities.--A. After July 1, 1976, no county or municipal corporation or authority shall construct, provide or operate without its boundaries any water supply impoundment system without first obtaining the consent of the governing body of the county or municipality in which such system is to be located; provided, however, no consent shall be required for the operation of any such water supply impoundment system in existence on July 1, 1976, or in the process of construction or for which the site has been purchased or for the orderly expansion of such water supply system.

B. No county or municipal corporation or authority shall construct, provide or operate without its boundaries any water supply impoundment facility without first obtaining the approval of the State Water Control Board that the facility is consistent with the state water plan as provided in § 62.1-44.36:3**, however, no consent shall be required for the operation of any such water supply impoundment system in existence, or in the process of construction, on July 1, 1994.

C. In any case in which the approval by such political subdivision's governing body is withheld the party seeking such approval may petition for the convening of a special court, pursuant to §§ 15.1-37.1:1 through 15.1-37.1:7 of the Code of Virginia

CONCLUSION

The Commission decided that public comment should be received on the options. It was decided that all of the options should be put out for such comment and that hearings would begin in the spring of 1994.

Respectfully Submitted,

Delegate Lewis W. Parker, Jr., Chairman
Senator Charles J. Colgan, Vice-Chairman
Delegate Watkins M. Abbitt, Jr.
Delegate J. Paul Councill, Jr.
Delegate Glenn R. Croshaw
Delegate James H. Dillard II
Delegate William P. Robinson, Jr.
Delegate A. Victor Thomas
Delegate Clifton A. Woodrum
Senator Elmo G. Cross, Jr.
Senator Clarence A. Holland
Senator Robert E. Russell, Sr.
Senator Stanley C. Walker
The Honorable J. Granger Macfarlane
Sandra Batie, Ph.D.

APPENDICES

VIRGINIA ACTS OF ASSEMBLY -- 1994 SESSION

Appendix 1

CHAPTER 310

An Act to amend and reenact §§ 56-210, 56-217 and 56-225 of the Code of Virginia, relating to the Distribution Cooperatives Act; business purposes.

[S 102]

Approved April 5, 1994

Be it enacted by the General Assembly of Virginia:

1. That §§ 56-210, 56-217 and 56-225 of the Code of Virginia are amended and reenacted as follows:

§ 56-210. Organization; purpose.

Any number of natural persons not less than five may, by executing, filing and recording articles of incorporation as hereinafter set forth, form a cooperative, either with or without capital stock, not organized for pecuniary profit, for the purpose of promoting and encouraging the fullest possible use of electric energy by making electric energy available at the lowest cost consistent with sound economy and prudent management of the business of such cooperative. In addition, such cooperative may, *in accordance with the provisions of subdivision (l 1) of § 56-217, establish a subsidiary to engage in the distribution, servicing and maintenance of television reception, satellite dishes, encrypted television programs, and decryption equipment to its members, but notwithstanding the provisions of § 56-217 (k), may not engage in the sale of television sets or video cassette recorders; provided, that no such television reception or encrypted television programs shall extend to any city or to any area within the service territory of any such cooperative that is served by a cable television operator or into which a cable television operator extends his service within one year of being so requested by such cooperative to the extent such subsidiary engages in the provision of cable service, as defined in § 15.1-23.1, such subsidiary shall comply with the provisions of § 15.1-23.1 applicable to cable television systems. Such cooperative may also establish a subsidiary to engage in the furnishing of water or in the furnishing of sewer facilities, provided that no such water or sewer facilities shall be furnished by a cooperative except after an affirmative resolution by the county board of supervisors or municipal government of any jurisdiction in which such service is proposed; and further provided that no such water or sewer facilities shall be provided by a cooperative to any area in which an authority created for either or both such purposes pursuant to Chapter 28 (§ 15.1-1239 et seq.) of Title 15.1 has such facilities available, except after an affirmative resolution by such authority.*

§ 56-217. General powers granted.

Each corporation formed under this article shall have power to do any and all acts or things necessary or incidental for carrying out the purpose for which it is formed, including, but not limited to the power:

- (a) To produce, generate, transmit and distribute electric energy.
- (b) To sue and be sued.
- (c) To have a seal and alter the same at pleasure.
- (d) To acquire, hold and dispose of property, real and personal, tangible and intangible, or interests therein and to pay therefor in cash or property or on credit, and to secure and procure payment of all or any part of the purchase price thereof on such terms and conditions as the board shall determine.
- (e) To render service and to acquire, own, operate, maintain and improve a system or systems.
- (f) To accept gifts or grants of money or of property, real or personal, from any person, municipality or federal agency and to accept voluntary or uncompensated services.
- (g) To sell, lease, mortgage or otherwise encumber or dispose of all or any parts of its property, as hereinafter provided.
- (h) To contract debts, borrow money and to issue or assume the payment of bonds, and other obligations.
- (i) To fix, maintain and collect reasonable fees, rents, tolls and other charges for service rendered.
- (j) To exercise all the powers set forth in § 56-49, including the power of eminent domain as prescribed for other public service corporations by general law.
- (k) To assist its members, by loans or otherwise, in the acquisition by them of such installation and wiring, and the obtaining of such machinery, equipment and appliances, as will enable them to secure the greatest benefit from the use of energy supplied by the

cooperative.

(l) To issue nonassessable nonvoting common and preferred capital stock and pay noncumulative dividends thereon not exceeding six percent annually and no cooperative operating hereunder shall pay more than six percent annually interest on membership capital.

(l 1) To become a member or stockholder in one or more other cooperatives or corporations created to engage in any business related or incidental to the purpose for which a cooperative is formed *including the provision of distribution, servicing and maintenance of television reception, satellite dishes, encrypted television programs and decryption equipment, and including the business of cable television systems subject to § 15.1-23.1, and water or sewer facilities.*

(m) To perform any and all of the foregoing acts and do any and all of the foregoing things under, through or by means of its own officers, agents and employees, or by contracts with any person, federal agency or municipality.

§ 56-225. Service to members.

Except as hereinafter provided, the corporate purpose of each cooperative formed hereunder shall be to render service to its members ~~only~~, and no person shall become or remain a member unless such person shall use electric energy supplied by such cooperative and shall have complied with the terms and conditions in respect to membership contained in the bylaws of such cooperative. *However, nothing in this article shall prevent a cooperative from engaging, in accordance with the provisions of subdivision (l 1) of § 56-217, in the furnishing of water, in the furnishing of sewer facilities, in the distribution, servicing and maintenance of television reception, satellite dishes, encrypted television programs or decryption equipment to members or nonmembers or, subject to § 15.1-23.1, in the provision of cable service.* The membership fee of the cooperative shall not exceed ten dollars. Should the cooperative acquire any electric facilities already dedicated or devoted to the public use it may, for the purpose of continuing existing service and avoiding hardship, continue to serve the persons served directly from such facilities at the time of such acquisition without requiring that such persons become members. In no event shall the number of such nonmembers served exceed forty-nine per centum of the total number of persons served by the cooperative. Such nonmember customers shall have the right to become members upon nondiscriminatory terms. The rates to such nonmembers shall be on a cost basis similar to those charged members.

VIRGINIA ACTS OF ASSEMBLY -- 1994 SESSION

CHAPTER 513

Appendix 2

An Act to amend and reenact §§ 62.1-260 and 62.1-263 of the Code of Virginia, relating to the Ground Water Management Act of 1992.

[S 372]

Approved April 9, 1994

Be it enacted by the General Assembly of Virginia:

1. That §§ 62.1-260 and 62.1-263 of the Code of Virginia are amended and reenacted as follows:

§ 62.1-260. Permits for existing ground water withdrawals in existing ground water management areas.

A. Persons holding a certificate of ground water right or a permit to withdraw ground water issued prior to July 1, 1991, in the Eastern Virginia or Eastern Shore Groundwater Management Areas and currently withdrawing ground water pursuant to said certificate or permit shall file an application for a ground water withdrawal permit on or before December 31, 1992, in order to obtain a permit for withdrawals. The Board shall issue ground water withdrawal permits for the total amount of ground water withdrawn during any consecutive twelve-month period between July 1, 1987, and June 30, 1992, together with such savings as can be demonstrated to have been achieved through water conservation; *however, with respect to a political subdivision, an authority serving a political subdivision or a community waterworks regulated by the Department of Health, the permit shall be issued for the total amount of ground water withdrawn during any consecutive twelve-month period between July 1, 1980, and June 30, 1992, together with such savings as can be demonstrated to have been achieved through water conservation.*

B. Persons holding a certificate of ground water right issued on or after July 1, 1991, and prior to July 1, 1992, in the Eastern Virginia or Eastern Shore Groundwater Management Areas and currently withdrawing ground water pursuant to the certificate shall file an application for a ground water withdrawal permit on or before December 31, 1993, in order to obtain a permit for withdrawals. The Board shall issue ground water withdrawal permits for the total amount of ground water withdrawn during any consecutive twelve-month period between July 1, 1988, and June 30, 1993, together with such savings as can be demonstrated to have been achieved through water conservation.

C. Persons holding a permit to withdraw ground water issued on or after July 1, 1991, and prior to July 1, 1992, in the Eastern Virginia or Eastern Shore Groundwater Management Areas shall not be required to apply for a ground water withdrawal permit until the expiration of the term of the permit to withdraw ground water as provided in subsection C of § 62.1-266, and may withdraw ground water pursuant to the terms and conditions of the permit to withdraw ground water. Such persons may apply for a ground water withdrawal permit allowing greater withdrawals of ground water than are allowed under an existing permit, and the Board in its discretion may issue a permit for such greater withdrawals, upon consideration of the factors set forth in § 62.1-263.

D. Persons holding a certificate of ground water right issued prior to July 1, 1992, or a permit to withdraw ground water issued prior to July 1, 1991, in the Eastern Virginia or Eastern Shore Groundwater Management Areas, who have not withdrawn ground water prior to July 1, 1992, may initiate a withdrawal on or after July 1, 1992, pursuant to the terms and conditions of the certificate or permit. The persons shall file an application for a ground water withdrawal permit on or before December 31, 1995, and may continue withdrawing ground water under the terms and conditions of their certificate or permit until the required ground water withdrawal permit application is acted on by the Board, provided that the ground water withdrawal permit application is filed on or before December 31, 1995. The Board shall issue a ground water withdrawal permit for the total amount of ground water withdrawn and applied to a beneficial use during any consecutive twelve-month period between July 1, 1992, and June 30, 1995, together with (i) such savings as can be demonstrated to have been achieved through water conservation and (ii) such amount as the Board in its discretion deems appropriate upon consideration of the factors set forth in § 62.1-263. This subsection shall not apply to a political subdivision, or an authority serving a political subdivision, holding a permit or certificate for a public water supply well for supplemental water during drought conditions, which shall apply for a ground water withdrawal permit as provided in § 62.1-265.

E. Persons withdrawing ground water for agricultural or livestock watering purposes in

the Eastern Virginia or Eastern Shore Groundwater Management Areas on or before July 1, 1992, shall file an application for a ground water withdrawal permit on or before December 31, 1993, in order to obtain a permit for withdrawals. The Board shall issue ground water withdrawal permits for the total amount of ground water withdrawn during any consecutive twelve-month period between July 1, 1983 and June 30, 1993, together with such savings as can be demonstrated to have been achieved through water conservation.

F. Persons withdrawing ground water for agricultural or livestock watering purposes, or pursuant to certificates of ground water right or permits to withdraw ground water issued prior to July 1, 1992, in the Eastern Virginia or Eastern Shore Groundwater Management Areas, may continue such withdrawal until the required permit application is acted on by the Board, provided that the permit application is filed by the appropriate deadline.

G. Persons applying for a ground water withdrawal permit may request that they be permitted to withdraw more ground water than the amount to which they may be entitled based on their historic usage and water conservation as set forth in this section. The Board in its discretion may issue a permit for a greater amount than that which is based on historic usage and water conservation, upon consideration of the factors set forth in § 62.1-263.

H. Failure by any person covered by the provisions of subsection A, B, D or E to file an application for a ground water withdrawal permit prior to the expiration of the applicable period creates a presumption that any claim to withdraw ground water based on history of usage has been abandoned. In reviewing any application for a ground water withdrawal permit subsequently made by such a person, the Board shall consider the factors set forth in § 62.1-263.

§ 62.1-263. Criteria for issuance of permits.

When reviewing an application for a permit to withdraw ground water, or an amendment to a permit, the Board may consider the nature of the proposed beneficial use, the proposed use of alternate or innovative approaches such as aquifer storage and recovery systems and surface and ground water conjunctive uses, climatic cycles, unique requirements for nuclear power stations, economic cycles, population projections, the status of land use and other necessary approvals, and the adoption and implementation of the applicant's water conservation and management plan. In no case shall a permit be issued for more ground water than can be applied to the proposed beneficial use.

When proposed uses of ground water are in conflict or when available supplies of ground water are insufficient for all who desire to use them, preference shall be given to uses for human consumption, over all others.

In evaluating permit applications, the Board shall ensure that the maximum possible safe supply of ground water will be preserved and protected for all other beneficial uses.

In evaluating the available ground water with respect to permit applications for new or expanded withdrawals in the Eastern Virginia or Eastern Shore Groundwater Management Areas, the Board shall use the average of the actual historical ground water usage from the inception of the ground water withdrawals of a political subdivision or authority operating a ground water and surface water conjunctive use system and shall not use the total permit capacity of such system in determining such availability.

VIRGINIA ACTS OF ASSEMBLY - 1994 SESSION

Appendix 3

CHAPTER 592

An Act to amend and reenact §§ 62.1-260 and 62.1-263 of the Code of Virginia, relating to permits for existing ground water withdrawals.

[H 1370]

Approved April 9, 1994

Be it enacted by the General Assembly of Virginia:

1. That §§ 62.1-260 and 62.1-263 of the Code of Virginia are amended and reenacted as follows:

§ 62.1-260. Permits for existing ground water withdrawals in existing ground water management areas.

A. Persons holding a certificate of ground water right or a permit to withdraw ground water issued prior to July 1, 1991, in the Eastern Virginia or Eastern Shore Groundwater Management Areas and currently withdrawing ground water pursuant to said certificate or permit shall file an application for a ground water withdrawal permit on or before December 31, 1992, in order to obtain a permit for withdrawals. The Board shall issue ground water withdrawal permits for the total amount of ground water withdrawn during any consecutive twelve-month period between July 1, 1987, and June 30, 1992, together with such savings as can be demonstrated to have been achieved through water conservation; *however, with respect to a political subdivision, an authority serving a political subdivision or a community waterworks regulated by the Department of Health, the permit shall be issued for the total amount of ground water withdrawn during any consecutive twelve-month period between July 1, 1980, and June 30, 1992, together with such savings as can be demonstrated to have been achieved through water conservation.*

B. Persons holding a certificate of ground water right issued on or after July 1, 1991, and prior to July 1, 1992, in the Eastern Virginia or Eastern Shore Groundwater Management Areas and currently withdrawing ground water pursuant to the certificate shall file an application for a ground water withdrawal permit on or before December 31, 1993, in order to obtain a permit for withdrawals. The Board shall issue ground water withdrawal permits for the total amount of ground water withdrawn during any consecutive twelve-month period between July 1, 1988, and June 30, 1993, together with such savings as can be demonstrated to have been achieved through water conservation.

C. Persons holding a permit to withdraw ground water issued on or after July 1, 1991, and prior to July 1, 1992, in the Eastern Virginia or Eastern Shore Groundwater Management Areas shall not be required to apply for a ground water withdrawal permit until the expiration of the term of the permit to withdraw ground water as provided in subsection C of § 62.1-266, and may withdraw ground water pursuant to the terms and conditions of the permit to withdraw ground water. Such persons may apply for a ground water withdrawal permit allowing greater withdrawals of ground water than are allowed under an existing permit, and the Board in its discretion may issue a permit for such greater withdrawals, upon consideration of the factors set forth in § 62.1-263.

D. Persons holding a certificate of ground water right issued prior to July 1, 1992, or a permit to withdraw ground water issued prior to July 1, 1991, in the Eastern Virginia or Eastern Shore Groundwater Management Areas, who have not withdrawn ground water prior to July 1, 1992, may initiate a withdrawal on or after July 1, 1992, pursuant to the terms and conditions of the certificate or permit. The persons shall file an application for a ground water withdrawal permit on or before December 31, 1995, and may continue withdrawing ground water under the terms and conditions of their certificate or permit until the required ground water withdrawal permit application is acted on by the Board, provided that the ground water withdrawal permit application is filed on or before December 31, 1995. The Board shall issue a ground water withdrawal permit for the total amount of ground water withdrawn and applied to a beneficial use during any consecutive twelve-month period between July 1, 1992, and June 30, 1995, together with (i) such savings as can be demonstrated to have been achieved through water conservation and (ii) such amount as the Board in its discretion deems appropriate upon consideration of the factors set forth in § 62.1-263. This subsection shall not apply to a political subdivision, or an authority serving a political subdivision, holding a permit or certificate for a public water supply well for supplemental water during drought conditions, which shall apply for a ground water withdrawal permit as provided in § 62.1-265.

E. Persons withdrawing ground water for agricultural or livestock watering purposes in

the Eastern Virginia or Eastern Shore Groundwater Management Areas on or before July 1, 1992, shall file an application for a ground water withdrawal permit on or before December 31, 1993, in order to obtain a permit for withdrawals. The Board shall issue ground water withdrawal permits for the total amount of ground water withdrawn during any consecutive twelve-month period between July 1, 1983 and June 30, 1993, together with such savings as can be demonstrated to have been achieved through water conservation.

F. Persons withdrawing ground water for agricultural or livestock watering purposes, or pursuant to certificates of ground water right or permits to withdraw ground water issued prior to July 1, 1992, in the Eastern Virginia or Eastern Shore Groundwater Management Areas, may continue such withdrawal until the required permit application is acted on by the Board, provided that the permit application is filed by the appropriate deadline.

G. Persons applying for a ground water withdrawal permit may request that they be permitted to withdraw more ground water than the amount to which they may be entitled based on their historic usage and water conservation as set forth in this section. The Board in its discretion may issue a permit for a greater amount than that which is based on historic usage and water conservation, upon consideration of the factors set forth in § 62.1-263.

H. Failure by any person covered by the provisions of subsection A, B, D or E to file an application for a ground water withdrawal permit prior to the expiration of the applicable period creates a presumption that any claim to withdraw ground water based on history of usage has been abandoned. In reviewing any application for a ground water withdrawal permit subsequently made by such a person, the Board shall consider the factors set forth in § 62.1-263.

§ 62.1-263. Criteria for issuance of permits.

When reviewing an application for a permit to withdraw ground water, or an amendment to a permit, the Board may consider the nature of the proposed beneficial use, the proposed use of alternate or innovative approaches such as aquifer storage and recovery systems and surface and ground water conjunctive uses, climatic cycles, unique requirements for nuclear power stations, economic cycles, population projections, the status of land use and other necessary approvals, and the adoption and implementation of the applicant's water conservation and management plan. In no case shall a permit be issued for more ground water than can be applied to the proposed beneficial use.

When proposed uses of ground water are in conflict or when available supplies of ground water are insufficient for all who desire to use them, preference shall be given to uses for human consumption, over all others.

In evaluating permit applications, the Board shall ensure that the maximum possible safe supply of ground water will be preserved and protected for all other beneficial uses.

In evaluating the available ground water with respect to permit applications for new or expanded withdrawals in the Eastern Virginia or Eastern Shore Groundwater Management Areas, the Board shall use the average of the actual historical ground water usage from the inception of the ground water withdrawals of a political subdivision or authority operating a ground water and surface water conjunctive use system and shall not use the total permit capacity of such system in determining such availability.

Appendix 4

Outline of Options Presentation

In formulating an agenda for the role that the state is to have regarding water resource management; there are four general areas to consider: (i) planning, (ii) development, (iii) utilization and (iv) incentives. In reaching conclusions on what the state role should be in these areas, it is useful to look at each in relation to the roles other entities can or want to play. How best these factors can be utilized to fulfill the Commonwealth's trust responsibilities in water is also of prime importance.

"Planning" can be viewed as information gathering about quantity, quality and current and future need as well as assessment of alternatives and options.

"Development" can be viewed as the physical process by which water is captured and distributed.

"Utilization" involves decisions on who gets the water, under what circumstances, for what purpose and in what quantities.

"Incentives" involves the methods by which those who have interests in water are encouraged to participate in any agenda established for planning, development and utilization.

1. Planning

Issues:

- Quality
- Quantity
- Current and future needs
- Evaluation and needs assessment and identification of alternatives
- Unit of analysis
 - Statewide
 - Substate

Options:

- Total state control
- Joint state and local partnership
- System where localities develop plans using state criteria
- Total local control

2. Development

Issues:

- Evaluation of long and short range alternatives
- Conjunctive use
- Storage for future growth
- Storage or reserves for drought preparedness
- Water level conditions which would trigger conservation measures
- Demand management
- Development of water supplies such as reservoirs
- Development of distribution systems

Options:

- Total state control
- Joint state and local partnership
- System where localities develop using state criteria
- Total local control

3. Utilization

Addressing the issue of utilization requires a determination of priorities. The establishment of priorities will require a consideration of such issues as the public trust doctrine, beneficial use, relative importance of instream and off-stream uses, and protection of economic interests.

a. Issue:

- Criteria for water transfers
- Consistency with priorities and plans
- Mitigation
- Alternatives analysis
- Needs assessment
- Conservation

Options:

- Establishment and implementation of criteria by state
- Established by state; implementation by localities
- Establishment and implementation by localities

b. Issue:

- Regulation of transfers
 - Interbasin
 - Between jurisdictions

Options:

- State approval required
- Transfers allowed by localities, subject to state criteria
- Transfers allowed by regional groups, subject to state criteria
- Local or regional autonomy subject to intervention by state
- Total local autonomy

c. Issue:

- Protection of sending area
 - Payment
 - Economic development considerations
 - Flow reserves
 - Development of storage

Options:

- State establishment of conditions for protection
- Local or regional control, subject to state intervention
- Local or regional control subject to state criteria
- Total local autonomy

d. Issue:

- Dispute Resolution
 - Special court with exclusive jurisdiction
 - State intervention (mandatory or optional)
 - Administrative with appeal
 - Formal or informal mediation
 - Binding arbitration
 - Courts
 - State intervention (mandatory or optional)
 - No state role

4. Incentives.

Issue:

- Conditions under which should the state provide incentives

Options:

- Financial assistance
- Role in interstate conflicts
- Help with relations with federal agencies such as in obtaining permits from Corps and EPA

Appendix 5

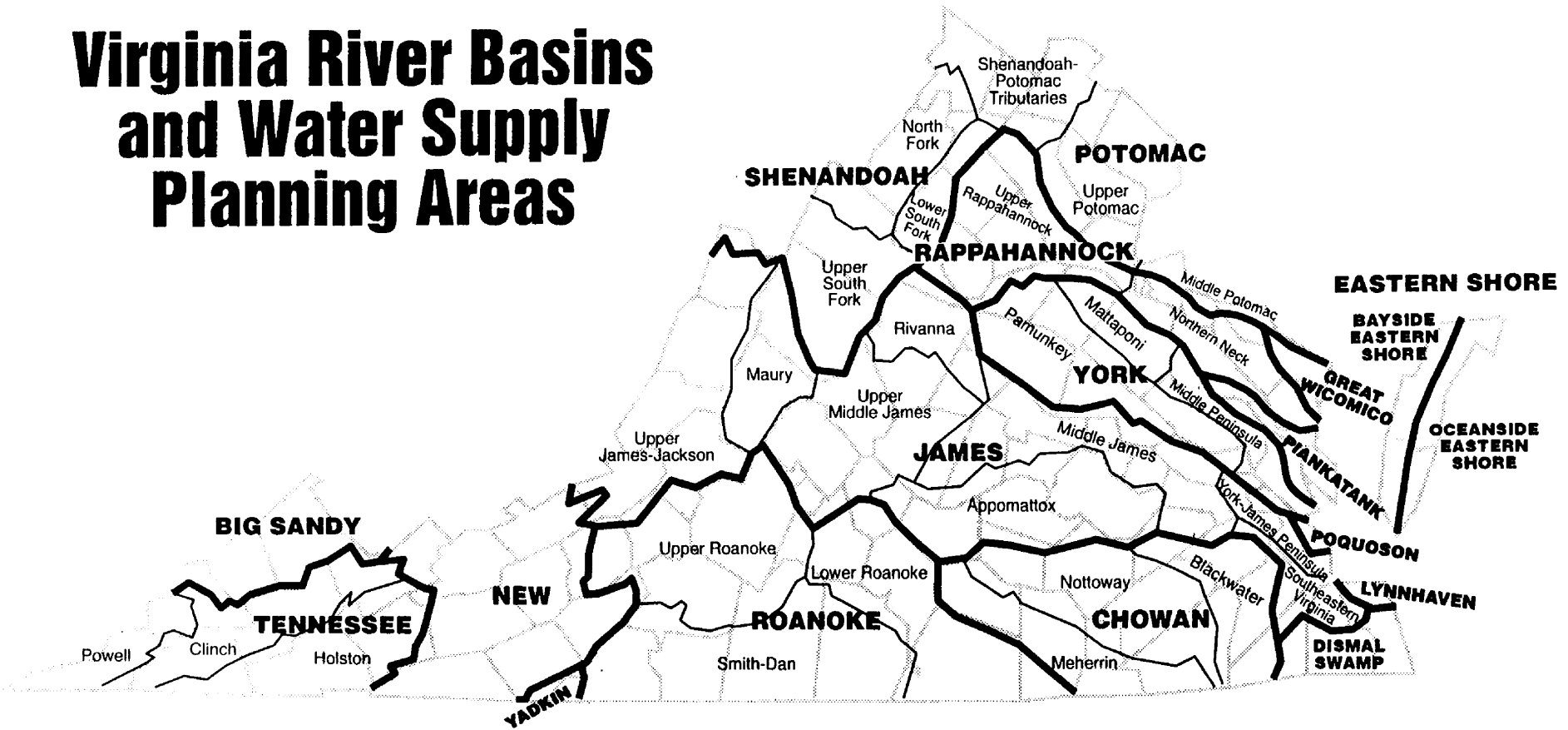
PDC 1	PDC 2	PDC 3	PDC 4	PDC 5	PDC 6
Counties	Counties	Counties	Counties	Counties	Counties
Lee	Buchanan	Bland	Floyd	Alleghany	Augusta
Scott	Dickenson	Carroll	Giles	Botetourt	Bath
Wise	Russell	Grayson	Montgomery	Craig	Highland
	Tazewell	Smyth	Pulaski	Roanoke	Rockbridge
		Washington			Rockingham
		Wythe			
Cities		Cities	Cities	Cities	Cities
Norton		Bristol	Radford	Covington	Buena Vista
		Galax		Clifton Forge	Harrisonburg
				Roanoke	Lexington
		Towns	Towns	Salem	Staunton
		Abingdon	Blacksburg		Waynesboro
		Chilhowie	Christiansburg	Towns	
		Damascus	Pulaski	Vinton	
		Fries			
		Glade Spring			
		Hillsville			
		Independence			
		Marion			
		Saltville			
		Rural Retreat			
		Troutdale			
		Wytheville			

PDC 7	PDC 8	PDC 9	PDC 10	PDC 11	PDC 12
Counties	Counties	Counties	Counties	Counties	Counties
Clarke	Arlington	Culpeper	Albemarle	Amherst	Franklin
Frederick	Fairfax	Fauquier	Greene	Appomattox	Henry
Page	Loudoun	Madison	Louisa	Bedford	Patrick
Shenandoah	Prince William	Orange	Fluvanna	Campbell	Pittsylvania
Warren		Rappahannock	Nelson		
	Cities			Cities	Cities
	Alexandria	Towns	Cities	Lynchburg	Danville
Cities	Fairfax	Culpeper	Charlottesville	Bedford	Martinsville
Winchester	Falls Church	Warrenton			
	Manassas	Remington		Towns	Towns
Towns	Manassas Park	Orange		Amherst	Rocky Mount
Front Royal		Gordonsville		Altavista	
Luray	Towns			Appomattox	
Middletown	Dumfries				
Stephens City	Herndon				
	Leesburg				
	Vienna				

PDC 13	PDC 14	PDC 15	PDC 16	PDC 17	PDC 18
Counties	Counties	Counties	Counties	Counties	Counties
Brunswick	Amelia	Charles City	Caroline	Lancaster	Essex
Halifax	Buckingham	Chesterfield	King George	Northumberland	Gloucester
Mecklenburg	Charlotte	Goochland	Spotsylvania	Richmond	King and Queen
	Cumberland	Hanover	Stafford	Westmoreland	King William
Cities	Lunenburg	Henrico			Mathews
South Boston	Nottoway	New Kent	Cities		Middlesex
	Prince Edward	Powhatan	Fredericksburg		
Towns					Towns
South Hill	Towns	Cities			Tappahannock
	Blackstone	Richmond			Urbanna
	Crewe				West Point
	Farmville	Towns			
	Victoria	Ashland			

PDC 19	PDC 22	PDC 23
Counties	Counties	Counties
Chesterfield	Accomack	Isle of Wight
Dinwiddie	Northampton	James City
Greensville		Southampton
Prince George	Towns	York
Surry	Chincoteague	
Sussex		Cities
		Chesapeake
Cities		Franklin
Colonial Heights		Hampton
Emporia		Newport News
Hopewell		Norfolk
Petersburg		Poquoson
		Portsmouth
		Suffolk
		Virginia Beach
		Williamsburg

Virginia River Basins and Water Supply Planning Areas



- NEW** Planning areas and major river basins *
- Holston Subareas
- YADKIN** Minor river basins

* The Shenandoah and Potomac planning areas comprise the Potomac-Shenandoah major river basin. All other planning areas are named after major river basins except for the Eastern Shore.

Appendix 7

Virginia Counties and Cities by Major River Basins, Subbasins and PDC*

Tennessee River Basin

Holston River Subbasin	PDC
Washington County	3
Smyth County	3
Scott County	1
Russell County	2
Grayson County	3
Bland County	3
Tazewell County	2
Wythe County	3
City of Bristol	3

Clinch River Subbasin

Lee County	1
Scott County	1
Wise County	1
Russell County	2
Dickenson County	2
Tazewell County	2
City of Norton	1

Powell River Subbasin

Lee County	1
Wise County	1

Big Sandy River Basin

Big Sandy Subbasin

Buchanan County	2
Dickenson County	2
Tazewell County	2
Wise County	1

New River Basin

Upper New River Subbasin

Carroll County	3
Floyd County	4
Grayson County	3
Montgomery County	4
Pulaski County	4
Smyth County	3
Wythe County	3
City of Galax	3
City of Radford	4

Lower New River Subbasin

Bland County	3
Giles County	4
Pulaski County	4
Craig County	5
Tazewell County	2

Roanoke River Basin

Upper Roanoke River Subbasin

Montgomery County	4
Roanoke County	5
Botetourt County	5
Franklin County	12
Bedford County	11
Campbell County	11
Henry County	12
Pittsylvania County	12
Floyd County	4
City of Roanoke	5
City of Salem	5
City of Bedford	11

Smith/Dan/Ararat River Subbasin

Henry County	12
Halifax County	13
Patrick County	12
Pittsylvania County	12
Grayson County	3
Carroll County	3

Franklin County	12
City of Danville	12
City of Martinsville	12
City of South Boston	13

Lower Roanoke River Subbasin

Charlotte County	14
Mecklenburg County	13
Appomattox County	11
Campbell County	11
Pittsylvania County	12
Halifax County	13
Brunswick County	13

James River Basin

Upper James/Jackson River Subbasin

Alleghany County	5
Bath County	6
Highland County	6
Botetourt County	5
Craig County	5
Roanoke County	5
Montgomery County	4
Giles County	4
City of Covington	5
City of Clifton Forge	5

Maury River Subbasin

Rockbridge County	6
Augusta County	6
Bath County	6
City of Lexington	6
City of Buena Vista	6

Upper Middle James Subbasin

Amherst County	11
Nelson County	10
Bedford County	11
Campbell County	11
Appomattox County	11
Buckingham County	14
Fluvanna County	10

Albemarle County	10
Cumberland County	14
City of Lynchburg	11
Rivanna River Subbasin	
Albemarle County	10
Fluvanna County	10
Greene County	10
Louisa County	10
Nelson County	10
City of Charlottesville	10
Middle James River Subbasin	
Goochland County	15
Henrico County	15
Charles City County	15
Buckingham County	14
Cumberland County	14
Powhatan County	15
New Kent County	15
Prince George County	19
Surry County	19
Chesterfield County	15
Fluvanna County	10
Hanover County	15
Isle of Wight County	23
York County	23
City of Richmond	15
City of Hopewell	19
City of Suffolk	23
City of Williamsburg	23
City of Newport News	23
Appomattox River Subbasin	
Appomattox County	11
Amelia County	14
Buckingham County	14
Chesterfield County	15
Cumberland County	14
Dinwiddie County	19
Nottoway County	14
Powhatan County	15
Prince Edward County	14
Prince George County	19
City of Colonial Heights	19

City of Petersburg	19
Southeastern Virginia Subbasin	
Isle of Wight County	23
City of Chesapeake	23
City of Norfolk	23
City of Portsmouth	23
City of Suffolk	23
City of Virginia Beach	23
City of Hampton	23
City of Newport News	23
Shenandoah/Potomac River Basin	
Upper South Fork Shenandoah River Subbasin	
Augusta County	6
Rockingham County	6
City of Harrisonburg	6
City of Staunton	6
City of Waynesboro	6
Page County	7
Warren County	7
North Fork Shenandoah River Subbasin	
Shenandoah County	7
Rockingham County	6
Frederick County	7
Page County	7
Warren County	7
Shenandoah River - Potomac River Tributaries Subbasin	
Clarke County	7
Frederick County	7
Warren County	7
City of Winchester	7
Upper Potomac River Subbasin	
Loudoun County	8
Fauquier County	9
Fairfax County	8
Middle Potomac River Subbasin	
Fairfax County	8

Prince William County	8
Arlington County	8
Loudoun County	8
Fauquier County	9
City of Fairfax	8
City of Alexandria	8
City of Falls Church	8
City of Manassas	8
City of Manassas Park	8

Lower Potomac Subbasin

Prince William County	8
Stafford County	16
King George County	16
Westmoreland County	17
Northumberland County	17

Rappahannock River Basin

Upper Rappahannock River Subbasin

Fauquier County	9
Rappahannock County	9
Culpeper County	9
Madison County	9
Orange County	9
Greene County	10
Stafford County	16
Spotsylvania County	16

Lower Rappahannock River Subbasin

Stafford County	16
Spotsylvania County	16
King George County	16
Westmoreland County	17
Lancaster County	17
Richmond County	17
Carolina County	16
Essex County	18
Middlesex County	18
City of Fredricksburg	16

York River Basin

Pamunkey River Subbasin	
Hanover County	15
Louisa County	10
Orange County	9
Spotsylvania County	16
Caroline County	16
King William County	18
New Kent County	15
Mattaponi River Subbasin	
Spotsylvania County	16
Caroline County	16
King and Queen County	18
King William County	18
Orange County	9
Gloucester County	18
York River Subbasin	
Gloucester County	18
King and Queen County	18
New Kent County	15
James City County	23
York County	23
City of Williamsburg	23

Chowan River Basin

Blackwater River Subbasin	
Dinwiddie County	19
Isle of Wight County	23
Prince George County	19
Southampton County	23
Surry County	19
Sussex County	19
City of Franklin	23
City of Suffolk	23
City of Petersburg	19
Meherrin River Subbasin	
Lunenburg County	14
Brunswick County	13

Greensville County	19
Mecklenburg County	13
Charlotte County	14
Southampton County	23
Prince Edward County	14
City of Emporia	19
 Nottoway River Subbasin	
Dinwiddie County	19
Sussex County	19
Lunenburg County	14
Prince Edward County	14
Nottoway County	14
Brunswick County	13
Greensville County	19
Southampton County	23
 Dismal Swamp Subbasin	
City of Suffolk	23
City of Chesapeake	23
City of Virginia Beach	23

Atlantic Ocean and Chesapeake Bay Coastal Basin

Chesapeake Bay	
Accomack County (Tangier Is.)	22
 Chesapeake Bay Coastal Subbasin	
Northumberland County	17
Lancaster County	17
Middlesex County	18
Mathews County	18
Essex County	18
King and Queen County	18
Gloucester County	18
 Lower Chesapeake Bay Subbasin	
York County	23
City of Poquoson	23
City of Newport News	23
City of Hampton	23
City of Norfolk	23
City of Virginia Beach	23

Eastern Shore Subbasin

Accomack County	22
Northampton County	22

*** Note: That while each county or city will be in only one PDC, it may fall within or be part of multiple basins and subbasins.**

**Comparison of Planning Options
Local Entity**

Appendix 8

**Subbasin
Commissions**

**Political
Subdivisions**

**Planning
District
Commissions (PDC)**

Option Elements

<p>1. Agency responsible for state water plan</p>	<p>SWCB</p>	<p>Same</p>	<p>Same</p>
<p>2. Principles & policies to follow in plan development</p>	<p>12 principles & policies</p>	<p>Same</p>	<p>Same</p>
<p>3. Components of state plan</p>	<ul style="list-style-type: none"> • 12 principles and policies • 9 Basin plans developed by SWCB • Subbasin plans developed by subbasin commissions 	<ul style="list-style-type: none"> • 12 principles and policies • 9 Basin plans developed by SWCB • Subbasin plan jointly and cooperatively developed by political subdivisions within the subbasin 	<ul style="list-style-type: none"> • 12 principles and policies • 9 Basin plans prepared by SWCB • Planning districts water plan prepared by PDCs
<p>4. Contents of basin plan</p>	<ul style="list-style-type: none"> • Current water withdrawals • Projected withdrawals • Estimates of current water resources to meet current and projected future uses, and I.D. subbasin with projected deficiencies • Suitability of storage sites • Delineation of subbasins • Establishment of timetable for submission of local plans 	<p>Same as subbasin commissions</p>	<p>Same except no delineation of subbasins</p>

**Comparison of Planning Options
Local Entity**

Optic Elements

5. Responsibility for developing local plan (strategies & projects)	<ul style="list-style-type: none"> • Subbasin commissions • One member from each city and county in subbasin (at least 4) • 1 from agriculture • 2 from industrial manufacturing, mining or electrical power generation • 1 from environmental 	Local political subdivisions within subbasin acting cooperatively	Each PDC
6. Local plan contents	<ul style="list-style-type: none"> • Description of strategies and projects to be implemented • Documentation of appropriateness • Timetable • Procedures to include public 	Same	Same
7. Staff for local plan development provided by	Members of subbasin commission and SWCB (upon request)	Local political subdivisions within subbasin and SWCB (upon request)	PDC and technical assistance from SWCB (upon request)
8. Public participation	Specific procedure established in statute	Statute specifies local governments to establish procedure	§ 15.1-431
9. Approval of local plan by local entity	¾ of subbasin commission members	Unanimous vote of all political subdivisions within basin	Unanimous vote of all political subdivisions within basin
10. SWCB criteria for approval of local plan	<ul style="list-style-type: none"> • Consistent with principles and policies • Consistent with state basin plan 	Same	Same

**Comparison of Planning Options
Local Entity**

Option Elements

11. Review of local plan by SWCB	Conducted pursuant to existing SWCB procedure for permits and certificates (case decisions under APA)	Same	Same
12. Time limit for SWCB approval of local plan	9 months from date of submission	Same	Same
13. Right to appeal SWCB's decision	<ul style="list-style-type: none"> • PDC • City or county within planning district • Major water users • Participants in SWCB's public hearing 	<ul style="list-style-type: none"> • Political subdivisions within subbasin • Major water users • Participant in SWCB's public hearing 	<ul style="list-style-type: none"> • PDC • City or county within planning district • Major water users • Participants in SWCB's public hearing
14. Failure to submit local plan	SWCB to develop local plan	Same	Same