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Anatomy of a Water Problem: Virginia Beach's Experience Suggests Time for a Change

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Democracy, political scientist E. E. Schattschneider has written, is a political system in which "leaders and organizations define the alternatives of public policy in such a way that the public can participate in the decision-making process." So that the public might have the information it needs to participate in revising Virginia's water laws, the Water Center is publishing a series of special reports analyzing the state's water management problems and discussing factors that should be considered when changes in the law are proposed, possibly during the 1986 session of the General Assembly.

The Commonwealth's abundant water resources generally have buffered the potential for water management problems in areas of the state experiencing rapid population growth, rising per-capita water use, and/or economic expansion via water-using industries that strain both the quantity and quality of supplies. It is unfortunate that ordinarily adequate supplies statewide have not forestalled the increasing vulnerability of certain areas of the state when acts of nature have pushed those localities with marginal supplies to the verge of full-blown water crises. The drought of 1980-81 was such a threshold for Tidewater Virginia. Norfolk's efforts to secure emergency groundwater supplies spawned three lawsuits that highlighted as never before the need to scrutinize Virginia's water management institutions. Although common law principles of riparian rights have been the authority for allocating surface waters, the common law principles applicable to groundwater are unsettled. The Groundwater Act of 1973, which was designed to provide additional management potential for well drilling in groundwater management areas such as Tidewater, contains so many exemptions that ultimately it has been rendered impotent as a management tool. The groundwater litigation in the Tidewater dispute was postponed for 10 years after Virginia Beach agreed to the terms of local jurisdictions for the drilling of emergency wells. Nevertheless, the need for institutional mechanisms to resolve use conflicts apart from the courtroom is urgently needed. Virginia Beach's effort to secure a surface water supply, which is described in this report, has spawned two more lawsuits because the chosen source is outside its jurisdiction on an interstate stream, thus arousing the fears of nearby Virginia localities and the state of North Carolina. After being in federal court for one-and-a-half years, at tremendous legal expense to all parties, the basic issues of the cases have still not been heard and the legal meter continues to run.

The citizens of the state should not be misled that (1) this is only an interstate issue, or (2) that the fundamental problem (water supply) is an isolated concern of Virginia Beach and the remainder of the state has no basic interest in the mechanism to resolve such disputes. If the chosen source were completely within the geographic boundaries of the state, Southside Virginians would be in state court expressing the same fundamental concerns as those being expressed in the two federal courts. If nothing is done to improve the management of the state's water resources, history will replay itself shortly as residents of the upper James River seek to exclude Newport News from using surplus water from the James. The voices from Henrico

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Illustrations by George Wills.

County sound very similar to those heard from southside Virginia in the Virginia Beach transfer. After the James River controversy, others will follow. The resolution of use conflicts and the need to examine the role of the state in water management cannot be postponed.

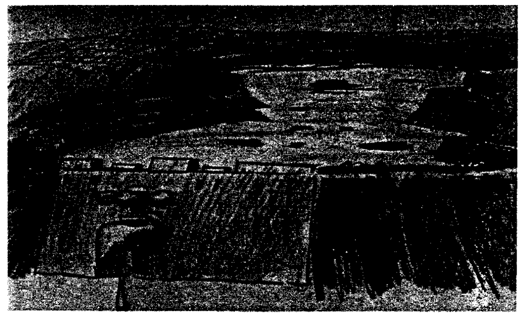
Introduction

The early history of Virginia Beach gave no indication that it would experience almost exponential growth after World War II. In 1940 its population was a mere 22,584, and today, with a population of more than 324,000, it ranks second to Miami as the largest resort city located on the Atlantic Ocean. Its population is projected to increase to 473,000 by the year 2030. Not only has its population increased, but so have its geographic boundaries. On January 1, 1963, the town of Virginia Beach merged with Princess Anne County to become the city of Virginia Beach.

The water supply for the town of Virginia Beach was a conglomerate of private wells and commercial enterprises until 1923 when it entered into an agreement with the city of Norfolk to provide water to the municipality. Norfolk constructed and still owns most of the water transmission lines in Virginia Beach. The latter is required to pay its pro rata share of operation, maintenance, and capital improvement costs of the Norfolk system. In 1973 the city entered into a contract to purchase all of the Norfolk water-distribution system located within the city of Virginia Beach, but title to the system will not pass to Virginia Beach for 20 years, in 1993. This contract also provided for the purchase of surplus water from Norfolk. The contract is quite specific that the obligation on the part of Norfolk is only to provide surplus water, but at the same time Virginia Beach is actually prohibited from introducing water from other sources into the distribution system.

During periods of precipitation, the Norfolk water system has a surface water capacity of approximately 81 million gallons per day (mgd). Of this amount, the system provides 40 mgd for Norfolk residents and 11 mgd for military establishments in the area, leaving approximately 30 mgd available for Virginia Beach. Although Virginia Beach is currently using only 25 mgd, its demand is expected to increase to 34 mgd by 1990. Somewhere in the next five-year period, Norfolk will not be able to meet the water supply needs of Virginia Beach. If a drought of the same severity as the one in 1980-81 should occur, the total available water supply from Norfolk would be about 59 mgd, leaving only 8 mgd (23 percent of its projected demand in 1990) available for Virginia Beach, assuming no reductions in use by Norfolk and the military establishments through conservation measures.

In the summer of 1977 a relatively mild drought resulted in the adoption of water conservation measures by Virginia Beach and Norfolk. The conservation measures initiated at that time enabled Virginia Beach to serve 79 percent more water accounts with only a 39 percent increase in water supply. The number of accounts, however, continued to grow, rising from 42,521 in 1976 to 58,706 in 1980 and to 82,000 in 1985. During this period of rapid growth, the area experienced another drought in 1980-81 that was quite severe. Because approximately 85 percent of Norfolk's raw water supply is provided by rainfall and runoff, it is subject to large fluctuations in quantity and quality and is especially vulnerable to drought conditions. To meet this emergency Norfolk attempted to supplement its water supply by drilling wells on property it owns in the city of Suffolk and the counties of South Hampton and the Isle of Wight. The local governments in these jurisdictions resisted, advising that they wanted to own and control the wells and to receive payment for the water withdrawn.



Conservation measures started during the 1977 drought enabled Virginia Beach to serve 70% more accounts with only 39% more water

Although the wells to be drilled were located within one of the groundwater management districts created pursuant to the Groundwater Act of 1973, the Act had no application since the attorney general had rendered an opinion in 1976 that municipalities are excluded from regulation by the domestic use exemption.[1] Thus, the controlling law under these circumstances was the common law, which in Virginia is incomplete and unclear on points of groundwater law under which use conflicts would be tried.[2] The result was that three different law suits were brought by the parties to reinforce their various positions.

Virginia Beach, which was not a party to the suits, meanwhile was faced with the reality that the resort area might have only a 50-percent water allocation for the summer.The urgency of the water crisis forced Virginia Beach in early 1981 to agree to the demands of the local jurisdictions for withdrawing groundwater. Five emergency wells were drillled at Virginia Beach's expense, and control of the pumps and wells remained with the local jurisdictions in which they are located. In addition Virginia Beach agreed to pay localities 15 cents per thousand gallons of water pumped and to compensate any private well owners injured by the new deep wells. Under the terms of the contracts with those jurisdictions, Virginia Beach may take water from the wells only by permission of the localities and after Virginia Beach declares a water shortage emergency, invoking its water restrictions and allocation ordinances. The effective water-distribution capability of all five wells is 10 mgd during a drought period. Virginia Beach's contract for access to three of the emergency wells expires in 1986, and its contract right to the use of the other two wells expires in 1991. Both contracts may be renewed upon mutual agreement of the parties, although renewal cannot be predicted.

After Virginia Beach signed contracts with the localities, the pending law suits were postponed for a period of 10 years, but no settlement of the fundamental legal issues was reached between the parties and the resolution of future water shortage disputes was only delayed. Virginia Beach has recognized for considerable time that the long-term solution to its water problem is development of the city's own water supply system since its current usage of 25 mgd is projected to increase to 57 mgd by 2030.

Search for a Solution

Through a series of engineering reports, four possible sources of water have been proposed for Virginia Beach—Lake Genito, Assamoosick Reservoir, Lake Gaston, and an in-town alternative. Six criteria were used to evaluate the various alternatives: quantity; quality; environmental impacts; reliability; cost; and legal, political, and institutional issues. Of the four proposed sources, withdrawal from Lake Gaston on the Roanoke River ranked first in three of the criteria, tied for first in another criterion, and tied for second in the last two criteria.

The Lake Gaston option would take water from a reservoir on the Roanoke River that is owned by Virginia Power at a point on the Pea Hill Creek branch just north of the North Carolina/Virginia border. The water once withdrawn would be transported by a 60-inch water line approximately 85 miles to Norfolk's raw water transmission system in the City of Suffolk. Passing through five counties and the City of Suffolk, it would cross thirty streams and rivers and be layed for the most part on existing easements for power lines, railroads, and water utilities (see *Figure 1*).

The initial withdrawal from the pipeline would be 10 mgd in the early 1990's. If current projections remain accurate,

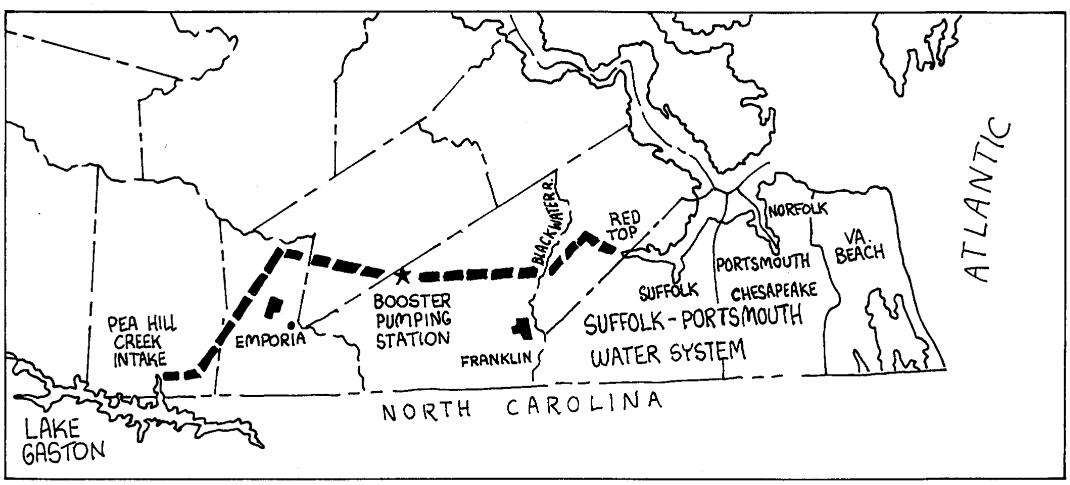


FIGURE 1

The Lake Gaston option would take water from a reservoir owned by Virginia Power on the Roanoke River. Once withdrawn, the water would be transported through a 60-inch water line approximately 85 miles long to Norfolk's raw-water transmission system in Suffolk.

Virginia Beach will require 57 mgd in the year 2030. The line also would supply 10 mgd for the town of Chesapeake, 1 mgd for the town of Franklin, and 1 mgd for the county of Isle of Wight by the year 2030.

Geographic Aspects of the Solution

The Roanoke River originates in the eastern half of the Blue Ridge mountains and flows southeasterly to the Albemarle Sound in North Carolina. Its drainage basin, 9,660 square miles, lies entirely within Virginia and North Carolina, with 64 percent of the total basin in Virginia. It is an 80-mile stretch of the river from the headwaters of the Buggs Island Lake in Virginia to the Roanoke Rapids dam in North Carolina that is of principal concern to this proposed diversion. Lake Gaston is situated between the two reservoirs eight miles upstream from the Roanoke Rapids project. Seventy-three percent of the basin above the Roanoke Rapids dam lies in Virginia.

The John H. Kerr Dam, whose reservoir (Buggs Island Lake) is located mainly in Virginia, is one of the projects built pursuant to the Flood Control Act of 1944 in which Congress authorized the expenditure of 100 million federal dollars to construct multipurpose water projects throughout the United States.[3] The principal purpose of the 1944 legislation was to build water projects to capture flood waters and thus to prevent flood damage, but Congress took note of additional benefits, including the sale of electric power and the storage of surplus water for municipal water use, in determining whether each project would produce enough benefits to offset its costs. The Act expressly authorized the sale of electric energy[4] and the sale of surplus water for domestic and industrial uses.[5]

The Kerr Dam was authorized by Congress as part of a general plan for flood control and other purposes in the

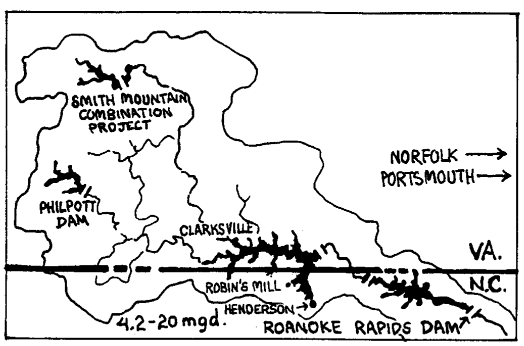


FIGURE 2
The proposed withdrawal of water by Virginia Beach from Lake Gaston is not a "first." Others are already taking water from Roanoke River reservoirs.

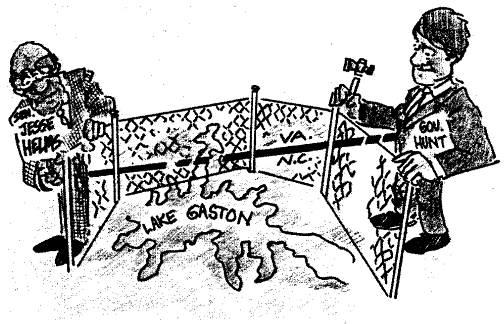
Roanoke River Basin, as recommended by the Chief of Engineers in House Document 650.[6] That document stated that the project could not be justified solely by expected flood control benefits but would be justified when other benefits, including electric power, were taken into account. Other benefits considered but not susceptible to direct monetary evaluation for the purposes of the 1944 cost-benefit analysis included possible value for future domestic water supply. The project as built includes 20 feet of storage above the power pool for flood control. The power generated is used for peaking needs and is sold to Virginia Power and Carolina Power and Light Company on a two-thirds/one-third ratio.

Kerr Dam was completed in 1953, and the reservoir was filled in 1954. At approximately the same time, Virginia Power obtained a license from the Federal Power Commission (FPC)[7] to build the Roanoke Rapids dam at a sight in North Carolina downstream from the Buggs Island Lake, and it was completed in 1955. In 1960 Virginia Power obtained a license from the FPC to construct the Lake Gaston dam between the Roanoke Rapids project and the Buggs Island Lake. The dam, which was completed in 1964, was built 145 miles upstream from the mouth of the Roanoke River.

The FPC licenses granted to Virginia Power require that the projects be operated "in such a manner as the Chief of Engineers . . . may prescribe in order that the flood control and/or other benefits from present and future improvements under the jurisdiction of the Corps of Engineers as authorized by Congress in the Roanoke River Basin will not be nullified or substantially impaired by the operation of the licensee's project." Virginia Power complies with the license requirement relative to flood control by allowing the Corps to determine the maximum daily discharge rate at Roanoke Rapids. The company also carries out a Corps instruction to use the three feet of flood storage space in the Gaston reservoir to store, and later release, inflow originating between the Kerr and Gaston dams. Incoming water from Buggs Island Lake is passed through the turbines at Gaston and Roanoke Rapids, with a small portion retained for overnight and weekend low-flow releases.

The Roanoke River below Roanoke Rapids dam supports reproduction of an abundant population of anadromous fish—principally striped bass. Minimum river flows are not sufficient during spawning season, and larger discharges are required from Buggs Island Lake.

The proposed withdrawal of water by Virginia Beach from the Gaston Reservoir is not a "first," as other users take water from Roanoke River reservoirs. The town of Clarksville, Virginia, takes water (an average of 0.27 mgd in 1984) from Buggs Island Lake. The city of Henderson, North



When the Hunt-Helms senate race began to heat up, North Carolina's Secretary of Natural Resources announced that the Tar Heel State would fight Virginia Beach's proposal

Carolina, took an average of 4.2 mgd in 1984 and is authorized to take up to 20 mgd under an existing contract with the Corps. Robin Mills, located in North Carolina, also withdrew 3.3 mgd from Buggs Island Lake in 1984. The Sanitary District at Roanoke Rapids, North Carolina, takes water (less than one mgd in 1984) from the Roanoke Rapids Reservoir (see *Figure 2*).

Action by Virginia and North Carolina

At the time Virginia Beach initiated its preliminary engineering studies to identify and evaluate its water supply options, there was general recognition on the part of Virginia and North Carolina that there were common groundwater withdrawal and water quality problems arising in the Tidewater Virginia/northeastern North Carolina area, and that solutions would require interstate cooperation. To facilitate solutions, North Carolina Governor James B. Hunt and Virginia Governor John B. Dalton revived a bi-state committee in April 1978 that had studied matters of mutual interest from 1974-76. Under a new agreement, the states undertook to develop and establish:

1. Suitable institutional arrangements for interstate and federal cooperation on water resource matters of mutual interest to the two states;

2. Suitable arrangements for sharing the water supply of interstate waters without adverse effects on the citizens of either state;

3. An official joint position on major issues, questions, and proposals in the broad area of water resources management and water quality control that significantly involve the common or several interests of both states;

4. A joint policy which provides that federal or federally licensed water resource developments along or near the common boundary of the two states shall be so planned and operated as to put the waters to beneficial use to the fullest extent of which they are capable;

5. A joint policy to facilitate flood control and watershed protection projects in either state by working to prevent adverse effects from these increased or decreased flows or drainage; and

6. A joint policy on the equitable sharing of water supply storage in federal or federally licensed projects on or near the common boundary of the two states.

Pursuant to this agreement between the governors, a series of subcommittees with representatives from both states were established to work on the technical issues associated with the various problems.[8] Progress was being made, and as late as August 22, 1983, the representatives from Virginia thought an understanding had been reached whereby Virginia agreed to undertake certain actions in exchange for North Carolina agreeing not to oppose the Virginia Beach pipeline project. At this point in time, however, the Senate race in North Carolina between Governor Hunt and Senator Jessie Helms began to "heat up," and on August 25, 1983, the Secretary of Natural Resources for North Carolina announced at a public hearing on the pipeline proposal by Virginia Beach that North Carolina would oppose the project. Further cooperation between the two states has now ceased.

Time for Action

Virginia Beach experienced two significant droughts within the period of 1977 to 1981. Conservation measures adopted during the period of shortage resulted in about a 25 percent reduction in per capita use. Since the last drought, the water use has not increased to its previous level and if the restrictions of 1981 were put in place now, the result would be only a 10 to 15 percent reduction in demand. Virginia Beach is faced with the prospect that under average conditions, there will not be sufficient water to meet its projected demand by the year 1990, and if a significant drought occurs, the available water supply might be as much as 50 percent short of meeting its projected need even with severe conservation measures in place. The city thus decided in 1983 to implement the alternative to secure water from Lake Gaston. In order for Virginia Beach to go forward with the construction of its water supply pipeline, which would cross several rivers, and construction of appurtenant structures in Lake Gaston, the city filed for a permit with the Corps of Engineers on July 15, 1983.[9]

In addition, Virginia Beach decided to contract with the Corps of Engineers for storage rights in the Buggs Island Lake pursuant to the Water Supply Act of 1958,[10] thus ensuring the availability of 60 mgd at Lake Gaston for withdrawal purposes. The storage had to be purchased in Buggs Island Lake rather than Lake Gaston because the operating agreement between the Corps of Engineers and Virginia Power requires that the water level at Lake Gaston remain relatively constant.

The granting of permits by the Corps of Engineers is predicated on compliance with the National Environmental Policy Act (NEPA).[11] It requires that a "detailed statement" be prepared for "major Federal actions significantly affecting the quality of the human environment."[12] This detailed statement has since come to be known as an environmental impact statement (EIS). Corps regulations pursuant to NEPA break down Corps activities into "Actions Normally Requiring an EIS"[13] and "Actions Normally Requiring an Environmental Assessment" (EA) but not necessarily an EIS.[14] Regulatory permits fall into this latter category. Unless a permit proposal clearly involves an activity with significant environmental impacts, an environmental assessment is first prepared to determine whether or not an EIS is necessary. After the environmental assessment is prepared, the impacts identified must be evaluated to see if they will "significantly" affect the quality of the "human environment." The following are the ten evaluation factors considered by the Corps to determine significance[15] and the determinations made by the Corps in evaluating Virginia Beach's water supply application:

1. *Adverse Environmental Impacts*—If there are both significant beneficial and significant adverse impacts, an EIS cannot be avoided just because on balance the net effect would be beneficial. The Corps' Environmental Assessment did not indicate any significant adverse environmental effects from the proposed withdrawal at Lake Gaston.

2. *Public Health and Safety*—The proposed project would not negatively affect public health or safety.

3. *Unique Characteristics of the Geographic Area*—There would be only minor effects on historic or cultural resources.

4. *Effects on the Quality of the Human Environment Are Likely to be Highly Controversial*—The project itself indisputably is highly controversial. However, all of the negative public comments have been social or economic in nature. Other than requests for the Corps to prepare an EIS, the most frequent comment has been, "We don't want this project—don't issue the permit." Some commentators have brought up questions of social and moral unacceptability, while others have predicted economic catastrophe. These are not, however, concerns over the project's effects on the human environment; these are social and economic concerns, and "economic or social effects are not intended by themselves to require preparation of an EIS."[16] Although these impacts are perceived, there is no evidence to indicate that they would actually occur.

5. *Possible Effects on the Human Environment Are Highly Uncertain or Involve Unique or Unknown Risks*—The effects of the human environment are highly uncertain.

6. *Action Establishes a Precedent for Future Action*—The precedent for drawing water from the Roanoke River was set years ago. It is commonly used as a source by towns and cities within the basin, and interbasin transfers into and out of the basin have existed for years. The EA indicates that water withdrawal permits issued to municipalities do not stimulate others to apply for permits to tap the same source.

7. *Action Is Related to Other Actions with Individually Insignificant but Cumulatively Significant Impacts*—Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. This action is not related to any known actions, significant or otherwise.

8. *Action May Adversely Affect Objects Listed or Eligible for Listing on the National Register of Historic Places*—No significant cultural resources are expected to be affected by the project.

9. *Actions May Adversely Affect an Endangered Species*—No endangered species are expected to be affected.

10. *Action Threatens a Violation of Federal, State, or Local Law*—It has been suggested by some commentators that this project may contravene laws or judicial decisions regarding riparian rights and interbasin transfer. It does not appear that any such putative violations would involve "law or requirements" imposed for the protection of the environment.

In addition to its application to the Corps for permission to construct a pipeline over navigable waters, Virginia Beach entered into a contract with the Corps to purchase 10,200 acre-feet of storage in Buggs Island Lake—the amount required to assure 60 mgd even during drought periods—in

When the Corps granted Virginia Beach a permit, the response was predictable

order to make the proposed withdrawal from Lake Gaston more secure. Under federal law, this requires a reallocation of storage from hydropower to water supply in Buggs Island Lake. The cost was $2 million, based on replacement cost of the storage for 10,200 acre-feet of water.[17] In addition, Virginia Beach will be required to pay 0.5 percent of the annual operation and maintenance expense, estimated to average about $6500 per year. Virginia Beach also agreed to reimburse Virginia Power for any loss in generating capability at its Gaston and Roanoke Rapids dams for the privilege of withdrawing 60 mgd before the water passes through its turbines.[18] There would be no reimbursement due Virginia Power if the water were taken after it had passed through the turbines, but Virginia Beach would have higher pumping costs because of increased lift of the water.

On December 7, 1983, the Corps issued a "Finding of No Significant Impact" (FONSI) on the application by Virginia Beach for permits under sec. 10 of the Rivers and Harbors Act and sec. 404 of the Clean Water Act. In essence it found the Environmental Assessment to be adequate and the need for a complete environmental impact statement to be unnecessary. In response to the FONSI, the Governor of North Carolina expressed concern with the Corps' findings on December 29, 1983, and January 4, 1984.

Political Repercussions

The granting of the permit by the Corps on January 9, 1984, elicited several responses. First, there was the strictly political response. Representative Dan Daniel, whose district includes many Southside Virginians opposed to the transfer, and four North Carolina congressmen asked that the House water resources subcommittee hold a public hearing on the issuance of the permit. They also sponsored a bill that would require the Corps to prepare a full environmental impact statement. The Governor of North Carolina wrote a letter to the North Carolina Attorney General that said, "The state should pursue every legal means at its disposal to prevent a single drop of water from being withdrawn from Lake Gaston.[19]

Legal Actions in Federal Court

On the day the Corps issued the permit to Virginia Beach, the city filed two suits in Federal District Court in Norfolk. The first suit was against the state of North Carolina and the Roanoke River Basin Association, a group which includes eight counties in North Carolina and four counties in Virginia. In their court filings, the Association claims to represent 300,000 persons and to speak for 1.3-million individuals. The second suit involves riparian landowners below Roanoke Rapids dam who have an interest under the common law of North Carolina in the streamflow past their property.

The suit against North Carolina and the Roanoke River Basin Association seeks a declaratory judgment that the Corps permits do in fact comply with federal law and therefore are valid. This action by Virginia Beach is predicated on the assumption that North Carolina would bring suit against the Corps in Federal District Court in Raleigh and that the suit would not provide a proper vehicle for a complete adjudication of the permit issues against all project opponents. Virginia Beach postulated that even if the permits were upheld in that suit it might later face challenges brought by other project opponents, and it could not afford to have one lawsuit after another as each petitioner sought to have his cause litigated separately.

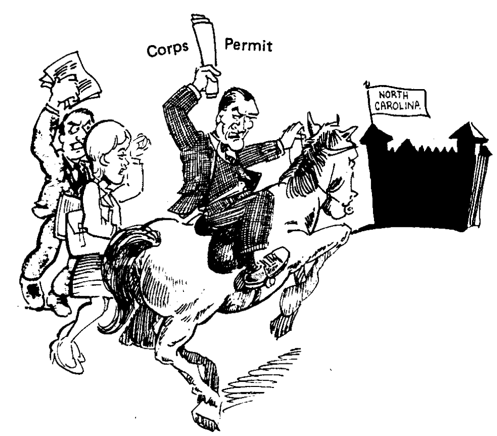
Virginia Beach also filed suit against Champion International Corporation and Weyerhaeuser Company both in their own right as riparians and also as representatives of all other owners of riparian lands on the Roanoke River below Roanoke Rapids dam. This class of all riparians below Roanoke Rapids dam is so large that the joinder of all members is impractical. The prosecution of separate actions by or against individual members of the class would create a risk of inconsistency and varying adjudication that could establish incompatible standards of conduct for Virginia Beach. The suit seeks a declaratory judgment that the defendants and members of the class have no right to the use of the water that will be diverted from the Roanoke River.

Champion has announced its intentions to build a major new paper mill on the main stem of the Roanoke River downstream from the Roanoke Rapids dam in North Carolina. The city attorney for Roanoke Rapids and the state of North Carolina have argued publicly that Champion will not make that investment if streamflow at the proposed location is reduced by Virginia Beach's diversion, because allegedly the flow would be insufficient to assimilate the pollutants to be discharged.

Weyerhaeuser Company is the owner and operator of a large paper mill near Plymouth, North Carolina. This mill uses approximately 45 to 50 mgd of water from the Roanoke River and discharges a like amount of industrial wastewater into the river daily. It is alleged that the Virginia Beach withdrawal from Lake Gaston would exacerbate low-flow conditions in the Roanoke River and that the quality of water at Plymouth would become unacceptable, assuming the continued operation of the large Weyerhaeuser plant. North Carolina has suggested that this could require Weyerhaeuser to limit or cease its production activities or to upgrade its wastewater treatment facilities.

The suit against Champion and Weyerhaueser does not include riparian owners above the Roanoke Rapids dam because the United States and Virginia Power have riparian rights to the upstream reservoirs. The United States owns a strip of land surrounding Buggs Island Lake, and no entity other than the United States has any riparian rights to the water stored in or flowing through the reservoir. Virginia Power owns a "fee simple" strip of land surrounding the Gaston and Roanoke Rapids reservoirs, and no entity other than Virginia Power has any riparian rights to water stored or flowing through those two reservoirs. Champion and Weyerhaeuser and the class they represent, however, are real property owners, abutting the main stem of the Roanoke River below Roanoke Rapids dam, and therefore they have riparian rights under the common law of North Carolina to the flow of the river past their property.

Virginia Beach will argue that the water to be diverted is flood water or surplus water to which no riparian, including Champion and Weyerhaeuser or the class they represent, has any right. In addition, the state of North Carolina has no right to apportion the flow of the Roanoke River that Virginia Beach proposes to divert, and neither Champion, Weyerhaeuser, nor any riparian owner in the class they represent has any right superior to the state of North Carolina, under whose law their riparian rights are created.



With the Corps permit in hand, Virginia Beach immediately went on the legal offensive, suing North Carolina and two downstream riparians

On January 12, 1984, three days after the Corps issued the permit to Virginia Beach, the state of North Carolina brought suit against the Corps in the Federal Court in Raleigh. North Carolina is challenging the Corps' right to issue the Virginia Beach permit without performing a formal EIS. The Roanoke River Basin Association joined with North Carolina in this suit in March 1984. A ruling for a formal EIS at a minimum will delay the project considerably and allow events to proceed at a much slower pace. If successful in arguing for an EIS, North Carolina will get, as one observer has stated, "to more bites at the apple:" another suit to contest the adequacy of the EIS and a third suit to challenge the agency's actions in light of the EIS.[20]

The contract to purchase water storage was signed by Virginia Beach on January 13, 1984, and approved by the Secretary of the Army on January 30, 1984. On the day Virginia Beach signed the storage contract, the Corps issued a "Finding of No Significant Impact" related to the reallocation of storage in Buggs Island Lake, stating that the Environmental Assessment on Virginia Beach's permit application to construct a water supply pipeline had disclosed all the significant environmental concerns and impacts associated with reallocation of storage and that it was fully adequate to inform a decision maker of the environmental consequences associated with the proposed action. The Corps indicated that it had reviewed the comments received regarding reallocation of storage, including comments provided by Governor James Hunt of North Carolina on December 29, 1983, and January 4, 1984, and had found the Environmental Assessment adequate to answer those concerns.

In response to the claims that the permanent withdrawal of 93 cubic feet per second (cfs) or 60 mgd from the Roanoke River will have a significant impact, the Corps indicated that the short-term effects were specifically addressed in the Environmental Assessment and the long-term effects must be placed in perspective. The hydrologic record for river flows from 1912 to 1982 at Roanoke Rapids shows an average flow of 8,079 cfs; the lowest average annual flow 3,095 cfs occurred in 1981 and the highest average annual flow of 13,220 cfs occurred in 1979. The naturally occurring difference between highest and lowest average annual flow is 10,125 cfs, and thus the requested 93 cfs is only 0.9 percent of the natural variation. The 93 cfs withdrawal, 1.2. percent of the average annual flow, was not considered significant when compared to the average flows and variations that cannot be controlled by man.

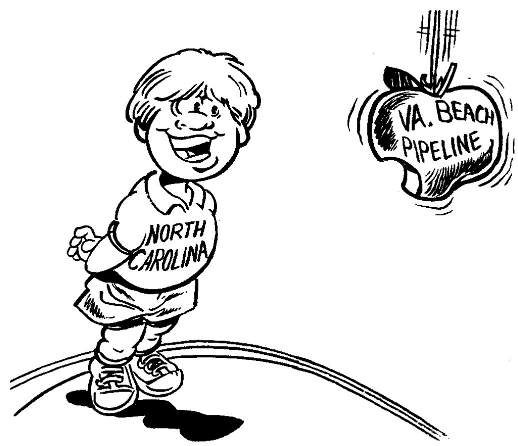
The Corps' statement on reallocation of storage also noted, with respect to concerns expressed over the possibility of future water allocations and cumulative impacts, that the Corps knew of no plans for additional water supply withdrawal from storage at Buggs Island Lake and that the request by Virginia Beach had been considered for possible cumulative impacts.

Some have challenged the Corps' authority to reallocate storage in Buggs Island Lake without the approval of Congress. However, approval by Congress is only required for storage reallocations which seriously affect the purposes for which a project was authorized or which involved major operational changes. Significant effects are defined in the Corps' regulation as 15 percent of the usable storage or 50,000 acre-feet, whichever is less. The storage in this case is only 10,200 acre-feet, and no major operational changes are required.

Virginia Beach amended its complaint in February 1984 to have the declaratory judgment extend to its storage contract with the Corps. The suit is a class action against all opponents to the project and thus seeks a complete determination of the issues with the parties who oppose the project.

Litigation Status to June 1, 1985

The judge in the Federal Court in Raleigh hearing North Carolina's challenge against issuance of a Corps permit without a full EIS has set June 30, 1985, as the final date for motions related to discovery—the obtaining of documents and other things which are in the exclusive possession of the other party. Recently the judge issued an order prohibiting the Corps from participating in the case in Norfolk Federal Court. The North Carolina case is moving slowly to trial, if nothing happens.

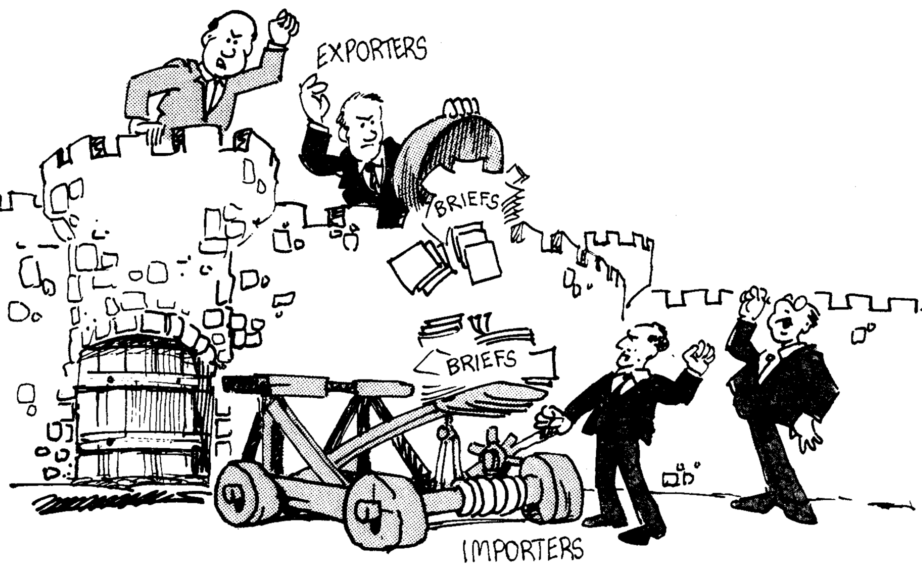


Three days later, North Carolina sued the Corps, hoping to force an EIS and get 'two more bites at the apple'

In the Federal Court in Norfolk where Virginia Beach is seeking a declaratory judgment that the Corps permit is valid, North Carolina has argued that it cannot be made a party to Virginia Beach's action under the doctrine of sovereign immunity, which states that the judicial powers of the United States shall not extend to a citizen of one state against another state.[21] The federal judge in Norfolk has ruled that North Carolina waived its rights under the Constitution when it voluntarily brought suit in another Federal Court on the same issue of whether the Corps permit is valid. The issue of whether North Carolina can be made a party to the suit has not been appealed to the Fourth Circuit, and arguments on this issue only are to be heard in late fall. The federal judge in Norfolk has dismissed all other procedural motions pending before that court.

Virginia Beach has now petitioned the Judical Panel on Multidistrict Litigation to combine the two proceedings pending before the federal courts in Raleigh and Norfolk on the validity of the Corps permit. They are arguing that the combined cases should be heard in Norfolk for convenience, fairness, and economy. The Panel has heard oral arguments on this consolidation proceedings, but Virginia Beach has provided further evidence on the issue pursuant to the Raleigh federal judge's order enjoining the Corps from participating in the case pending in Norfolk.

On July 10, 1984, the Federal Court in Norfolk granted a stay in the proceedings against the riparian owners in



There must be a more rational way of managing the public water resources of the state so that the concerns of both the exporting and importing areas are balanced for the benefit of all

North Carolina until the validity of the permit has been resolved. It was the court's feeling that the defendants in this action should not be put to the trouble and expense of presenting a defense when the basic legality of the project is still in dispute. If the project is ultimately approved, this action will be expedited with no prejudice to Virginia Beach.

Conclusion

The legal sparring between Virginia Beach and North Carolina reflects only the latest attempt by Tidewater communities to bring more than a decade of identifying options and selecting a source to a close. in the early 1970's, Tidewater communities began their study of supply alternatives, and by 1974 Congress had authorized a study by the U.S. Army Corps of Engineers. The Corps' development of a long-range water supply plan for southeastern Virginia began in 1976 with an evaluation of 36 different sources, a list that was soon reduced as 24 were eliminated for such reasons as low hydrologic capability, public health considerations, and/or technical feasibility. Meanwhile, a consulting firm for the Tidewater communities as early as 1975 recommended the selection of Lake Gaston and thus provoked the beginning of the bitter opposition by Southside Virginia and North Carolina to the plan.

Early concerns focused on the project's effect on reservoir levels in Lake Gaston and nearby Buggs Island Lake, including the impact on recreational uses of the area. More importantly, southsiders feared the loss of their water supply to an insatiable urban community. The Corps gave assurances that a withdrawal of 40 mgd would have little effect on lake levels, but concerns about Tidewater's rapid growth and anxiety that there would be no end to its need for Lake Gaston's water have never been abated since the Corps formally announced its intention to recommend Lake Gaston in August 1978.

Southside Virginians and North Carolina riparians notwithstanding, Virginia Beach is facing an impending water shortage. This fact, coupled with the whole area's vulnerability to drought, the dependence of several major military installations on Norfolk's water supply, and the 15 years that have elapsed since Tidewater's first supply studies, forces all concerned to recognize the gap in management mechanisms for this precious public resource.

Virginia Beach has a dilemma that is not unique among certain areas of the state experiencing rapid increases in water demand relative to the lead time required for the development of supplies. The fact that the current crisis involves an interstate stream should not cloud the basic issues. The concerns being expressed by the citizens of southside Virginia would not change if the Gaston reservoir and Buggs Island Lake were completely within the boundaries of the Commonwealth. The concerns expressed by the residents living near the two reservoirs are very similar to those being heard from the residents of Henrico County, as the state begins to consider a Corps proposal to divert water from the James River to serve the water supply needs of Newport News. Transbasin diversion has occurred for years on an ad hoc basis throughout the Commonwealth. It now appears that these transfers must be preceeded by lengthy and expensive legal proceedings which ultimately only will delay, not avoid, the transfers and significantly increase the cost of water to Virginia citizens. There has to be a more rational way of managing the public water resources of the state so that the concerns of both the exporting and importing areas are balanced and the water resource is used effectively and efficiently for the good of the Commonwealth. The resolution of use conflicts and the need to examine the role of the state in water management cannot be postponed forever.

FOOTNOTES

1. *Opinions of the Attorney General and Report to the Governor* (1975/76), pp. 326-30.
2. Virginia has made no clear choice between the absolute ownership and reasonable use doctrines. The absolute ownership rule grants a landowner the unqualified right to use any resources lying on, above, or below his land in whatever manner he sees fit. The reasonable use rule qualifies a landowner's right to use the water under his land; the usage must be reasonable and must occur on the land on which the water is found. The 1927 case of *Clinchfield Coal Corporation v. Compton* indicated that the choice of doctrines was still open to question. Also unresolved is the relationship between control of water resources and the powers of municipal corporations in the areas of zoning and land use policy.
4. *Id.* at sec. 5, 58 Stat. 890.
5. *Id.* at sec. 6, 58 Stat. 890.
6. House Document 650, 78th Congress, 2nd Session (1944).
7. The Federal Power Commission has been renamed the Federal Energy Regulatory Commission (FERC).
8. Virginia Beach's water supply; a groundwater cone of depression originating in Franklin, Virginia; and water quality problems in the Chowan River and Albemarle Sound were the basic issues examined by the bi-state subcommittees.
9. A permit is required pursuant to sec. 10 of the Rivers and Harbors Act of 1899 (30 Stat. 1151, 33 U.S.C. 403) and sec. 404 of the Clean Water Act of 1977 (P.L. 95-217, 33 U.S.C. 1344). The Department of the Army is required to issue a permit for construction in or over navigable waters, as well as dredging or filling navigable waters, or the accomplishment of any work affecting the course, location, condition, or capacity of such waters.
10. Water Supply Act of 1958, P.L. 85-500, 72 Stat. 319.
11. National Environmental Policy Act of 1969, P.L. 91-190, 42 U.S.C.A. secs. 4321-4370.
12. *Id.* at sec. 4332.
13. 33 C.F.R. 230.6.
14. 33 C.F.R. 230.7.
15. 40 C.F.R. 1508.27(b)(1)-(10).
16. 40 C.F.R. 1508.14.
17. Purchased storage was 0.5 percent of the total storage's replacement value of $400 million.
18. Virginia Beach has agreed to pay Virginia Power one-third kilowatt-hour per 1000 gallons of water at the current price paid to co-generator—those from whom Virginia Power purchases power—for the privilege of withdrawing water before it passes through the turbines.
19. Richmond Times-Dispatch, January 10, 1984. This was a rather abrupt change in North Carolina's attitude toward cooperating with Virginia on water problems of mutual concern. The new stance seemed to develop when the transfer of water from Lake Gaston to Virginia Beach became an issue in the North Carolina senatorial contest as Senator Jessie Helms alleged that Governor James Hunt had tried to make a deal with Virginia interests over the proposal. (Milton S. Heath, Jr., "Virginia-North Carolina Water Resources Issues: The Lake Gaston Pipeline." Paper presented at the annual conference of the American Society of Civil Engineers, Baltimore, Maryland, May 29, 1984.)
20. Heath, *supra* note 19.
21. U.S. Constitution, Amendment XI.