

REPORT OF THE
STATE WATER STUDY COMMISSION
TO
THE GOVERNOR
AND
THE GENERAL ASSEMBLY OF VIRGINIA



HOUSE DOCUMENT NO. 16

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF PURCHASES AND SUPPLY

RICHMOND

1978

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**Report of the
State Water Study Commission**

To

The Governor and the General Assembly of Virginia

Richmond, Virginia

December, 1977

To: The Honorable Mills E. Godwin, Jr., Governor of Virginia

and

The General Assembly of Virginia

I. STATEMENT OF CHAIRMAN

The 1977 General Assembly passed House Joint Resolution No. 236 which calls for a study of the water supply and allocation problems of Northern and Southeastern Virginia with a report, including recommended solutions and legislation necessary for implementation, by December 1, 1977. A nine-member State Water Study Commission was appointed to assist in this endeavor.

The Commission, having been assisted by the staff of the State Water Control Board, has worked diligently to identify and evaluate possible alternatives for the water supply problems of both the Northern and Southeastern sections of the State. However, the magnitude and complexity of the work proved to be a formidable task and the Commission recognizes that it may have indeed only scratched the surface.

As Chairman of the State Water Study Commission, I am pleased to submit the attached report outlining specific interim recommendations for each of the two study areas. Pursuant to our legislative mandate, draft legislation necessary to implement the recommendations is now undergoing review and should be finalized within the next few weeks. The legislation will include: a resolution to expand and extend the Commission for at least one year; a bill establishing a permit system for withdrawals of water from the Potomac; and, a bill empowering localities to declare water

emergencies and to adopt ordinances restricting water usage for the duration of the emergency.

Respectfully submitted,

J. Lewis Rawls, Jr.

II. INTRODUCTION

The 1977 Session of the General Assembly adopted House Joint Resolution No. 236 which assigned responsibility to recommend to the General Assembly ways to resolve water supply and allocation problems (particularly those of Southeastern and Northern Virginia) and draft legislation required for implementation of these recommendations. The resolution is set out as follows:

HOUSE JOINT RESOLUTION NO. 236

Requesting the State Water Control Board to recommend to the General Assembly ways to address water supply and allocation problems.

WHEREAS, surface and ground water is a resource which is vital to the health, safety, and economic welfare of the people of the Commonwealth; and

WHEREAS, the assurance of adequate water supplies for localities is essential to their future development and economic growth; and

WHEREAS, a study prepared by the Joint Legislative Audit and Review Commission found that nearly two million residents of Northern and Southeastern Virginia face potentially severe water supply shortages as early as nineteen hundred eighty; and

WHEREAS, other recent studies prepared by the Council on the Environment, the State Water Control Board and the Water Resources Research Center of the Virginia Polytechnic Institute and State University have identified similar water supply and allocation problems; and

WHEREAS, the General Assembly has appropriated funds to the State Water Control Board to prepare water resource plans which should be used to identify water supply problems and also to determine and recommend to the General Assembly appropriate measures to resolve these problems pursuant to §§ 62.1-44.36, 62.1-44.37 and 62.1-44.38 of the Code of Virginia; and

WHEREAS, the State Water Control Board has not recommended to the General Assembly specific ways or alternatives to resolve impending water supply shortages; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the State Water Control Board is hereby requested to present to the General Assembly recommendations that will address the surface and groundwater supply and allocation problems on a broad scale Statewide basis cited in the abovementioned studies to include the extent to which present laws, doctrines, and policies, including the Riparian Document and its general prohibition of interbasin transfers may facilitate or frustrate the implementation of a Statewide water resource management plan which will assure cost effective long-term solutions to water supply problems for

agriculture, industry and municipalities. In formulating such recommendations the Board shall: (1) identify the extent and nature of each water supply and allocation problem for Northern and Southeastern Virginia, and adopt an official position with respect to each problem pursuant to § 62.1-44.38. The Board recommendations shall include any draft legislation required to accomplish each recommendation.

In carrying out the purpose specified in this resolution, a State Water Study Commission is hereby created by the House of Delegates, and the Senate concurring, to provide legislative guidance on any recommended legislation and to assist the Board in holding public hearings through the State in order to ensure maximum participation on the part of local governments, industries, and the citizens of the Commonwealth.

The Commission shall be composed of nine members appointed as follows: the Speaker of the House of Delegates shall appoint three members from the membership thereof; the Committee on Privileges and Elections of the Senate shall appoint three persons from the membership of the Senate; and the Governor shall appoint one member of the State Water Control Board and two persons from the State at large. The members of the Commission shall elect a Chairman and Vice-Chairman from the membership thereof. If a vacancy occurs for any reason, the appropriate above-named person or committee shall appoint a successor.

All agencies of the State shall assist the Board of Commission upon request.

Funds required to accomplish the purposes stated herein shall be taken from the existing appropriations made to the State Water Control Board. All Commission members shall be reimbursed for necessary expenses incurred in the work of the Commission. The Commission shall complete its work and report to the Governor and the General Assembly not later than December one, nineteen hundred seventy-seven.

J. Lewis Rawls, Jr., of Suffolk, a member of the Senate of Virginia was elected Chairman. James H. Dillard, II, of Fairfax, a member of the House of Delegates, was elected Vice-Chairman.

In addition to the Chairman and Vice-Chairman, Charles J. Colgan of Manassas and Wiley F. Mitchell, Jr. of Alexandria, members of the Senate, were appointed to the Commission. Also appointed to serve from the House of Delegates were Gerald L. Baliles of Richmond and Glenn B. McClanan of Virginia Beach.

The following citizens were appointed pursuant to the resolution to serve on the Commission: George M. Cornell of Suffolk; Louis L. Guy, Jr., of Fairfax; and Robert R. Peters of Norfolk. Bragdon R. Bowling, Jr. and Sieglinde F. Nix of the Division of Legislative Services served as staff to the Commission.

Following the appointment and organization of the Commission, it was

agreed that in order to make the most effective use of the membership of the Commission, and to insure that the major items of the resolution charge would be dealt with properly, the Commission should be divided into three subcommittees. Subcommittees were assigned responsibilities for investigation and recommendations under the following major headings: Northern Virginia Water Supply and Allocation Problems, Legal Problems, and Southeastern Virginia Water Supply and Allocation Problems.

The Commission met again on July 27, 1977, in Richmond. At this meeting, the Norfolk District Engineer of the United States Army Corps of Engineers presented a report to the Commission on the status of a study being made... "to determine if water supply projects can be developed to meet the water supply needs of the Southside Hampton Roads area." The study is being conducted by the District Engineer in compliance with a 1974 directive of the Committee on Public Works of the United States Senate. The genesis of the directive of the Senate committee originated with efforts put forth by representatives of the study area. The District Engineer anticipated that the Corps of Engineers' water supply study would be completed in mid-year 1978. The Corps of Engineers' study has resulted in the evaluation of thirty-six alternatives as potential solutions to the Southeastern Virginia water supply problem.

Thirty-two of the alternatives considered in the Corps of Engineers' study have been eliminated with four remaining, any one of which, or various combinations or components thereof, would satisfy the Corps of Engineers' projected long-term water supply demands for the study area. In addition, the State Water Control board requested that the Corps retain a fifth alternative for study, that of the Peahill Creek (Lake Gaston) withdrawal intake.

The Commission, having been apprised of the scope, objectives, and timing of the Corps of Engineers' study, and after having been informed of the progress being made, decided that it would not be in the best interest of the Commonwealth to proceed with a separate study for the Southeastern Virginia water supply and allocation problems, but to await completion of the Corps of Engineers' study.

Starting in July 1977, the Commission held public hearings or public meetings in Suffolk, Front Royal, Manassas, Falls Church, Leesburg, and Fairfax. These public hearings and public meetings were held in order to obtain the broadest public input possible from people concerned about water supply and allocation problems. In addition, the three subcommittees of the Commission met on eleven different occasions to deliberate and decide upon specific charges of responsibility as found in the resolution.

Consideration was given by the Commission to legal questions pertinent to successful implementation of alternative programs to satisfy water supply and allocation problems in both Northern Virginia and Southeastern Virginia. The Commission concluded that several attractive and viable alternatives for solving the water supply and allocation problems in both geographical areas would require export of water for use outside the river basin from which withdrawn, thereby contravening the common law

doctrine of riparian rights embodied in statutory law and in decisions of the courts.

The Commission recommends that in order to properly assert and protect the riparian rights of the Commonwealth, a water withdrawal permit system is needed to equitably allocate water for use in the Potomac River and its tributaries.

The concept of requiring water-saving devices and mandatory conservation measures is also endorsed by the Commission.

Accordingly, the Commission suggests that legislation to implement these concepts be recommended, but recognizes the need to carefully construct such legislation and recommends that such legislation be the subject of further consideration. Suggested legislation embodying the concepts endorsed by the Commission, water withdrawal by permit system in the Potomac River and its tributaries and water use restrictions has been drafted and is currently under review by the Commission.

III. RECOMMENDATIONS

The specific interim recommendations of the Commission are as follows:

A. Statewide

With respect to the Commonwealth as a whole, the Commission recommends that:

1. Local political subdivisions be given authority to work toward reducing per capita water demand by:
 - a. amending plumbing and building codes to allow the use of water-saving devices and appliances in new construction; and
 - b. implementing rate structures which encourage conservation.
2. Local jurisdictions be given authority to declare water emergencies and to adopt ordinances restricting the use of water for the duration of the emergency. (Enabling legislation has been drafted and is currently undergoing review by the Commission)
3. Groundwater inventory and exploration programs should be implemented in any area deemed to be a potential supplemental source of water supply for water short areas of the State utilizing outside consulting services to gather the data necessary to determine the quality and quantity of available water from underground sources.

B. Northern Virginia

The Commission, in accordance with recommendations of the Northern Virginia Subcommittee, concludes that, at least for the next several decades, the Verona, Catoctin Creek, Goose Creek and other major upstream impoundments are not viable alternatives. In the meantime, the Commission presents the following interim recommendations:

1. With the elimination of the major Shenandoah and Potomac Basin upstream impoundments, the storage needs of Northern Virginia for drought conditions can best be met by better management of existing reservoirs within Northern Virginia and possibly new reservoirs such as Cedar Run. This improved management will require augmentation of additional raw water supply from elsewhere in the Potomac Basin; e.g., Potomac or Shenandoah pumpovers. The Potomac pumpover may be a direct pipeline from the proposed Herndon water treatment plant to the present Occoquan plant, with reversible flow capacity or a one-way pipeline from the proposed Herndon plant to the headwaters of Cub Run which feeds the Occoquan Reservoir. More detailed analyses of these alternatives is needed to determine the best solution.
2. Northern Virginia communities and the State should work toward reducing the per capita water demand by:

- a. amending plumbing and building codes to mandate the use of water-saving devices and appliances in new construction; and
 - b. implementing rate structures which encourage conservation.
3. The proposed Fairfax County Water Authority intake is essential as an early major component of any solution to Northern Virginia's water supply problems.
 4. The Commonwealth of Virginia and Northern Virginia localities should proceed immediately to confirm their riparian rights to Potomac River water, and the Governor should take such legal action as may be necessary and appropriate to accomplish this end. Further, the Commission agrees that if after a reasonable length of time (February 15, 1978), satisfactory resolution is not reached, they would recommend that the State immediately institute legal proceedings.
 5. The Northern Virginia jurisdictions should work together to manage regional water supplies during water shortage emergencies.
 6. The Occoquan Reservoir should be raised by a height of five feet to provide additional storage at minimal cost. Such construction should be accomplished with sufficient engineering safeguards to prevent flooding and to protect the structural integrity of the dam.
 7. Finished water interconnections between adjacent utilities should be constructed to serve as back-up supply during emergencies.
 8. Identify, inventory and where possible utilize existing reservoirs, quarries, and other storage facilities to augment available water supplies.

C. SOUTHEASTERN VIRGINIA

The Commission, in accordance with recommendations of the Southeastern Virginia Subcommittee, concludes that, since the Corps of Engineers is currently involved in a detailed study of water supply problems in that area which is scheduled for completion in mid-1978, and since implementation of any alternative at this time may jeopardize possibilities of future Federal funding due to the lack of having been formulated within the constraints of the Federal government, it would not be in the best interest of the Commonwealth to proceed with a separate study. The Commission does, however, offer the following interim recommendations:

1. The Southeastern Virginia jurisdictions should work together to manage regional water supplies during water shortage emergencies.
2. Finished water interconnections between adjacent utilities should be constructed to serve as back-up supply during emergencies.
3. Identify, inventory and where possible utilize existing reservoirs.

quarries and other storage facilities to augment available water supplies.

D. CONTINUATION OF COMMISSION

The Commission recommends that the State Water Study Commission be expanded to reflect a Statewide constituency and extended for at least one year with an additional report and recommendations due on or before December 1, 1978. The expanded Commission would be composed of fourteen members to be appointed as follows: five from the membership of the Senate; five from the membership of the House; and the Governor shall appoint four members from the State at large. A copy of the suggested resolution is included as Appendix I to this report.

Respectfully submitted,

J. Lewis Rawls, Jr., Chairman

James H. Diliard, Vice-Chairman

Gerald L. Baliles

Charles J. Colgan

George M. Cornell

Louis L. Guy, Jr.

Glenn B. McClanan

Wiley F. Mitchell, Jr.

Robert R. Peters

APPENDIX I

SENATE JOINT RESOLUTION NO.....

Continuing the State Water Study Commission.

WHEREAS, surface and ground waters are recognized as an important and essential resource vital to the health, safety and economic welfare of the people of the Commonwealth; and

WHEREAS, the State Water Study Commission was created in nineteen hundred seventy-seven pursuant to House Joint Resolution No. 236 to recommend to the General Assembly ways to address water supply and allocation problems, particularly in Northern and Southeastern Virginia; and

WHEREAS, the effects of the drought of the summer of nineteen hundred seventy-seven and Commission findings during that period have shown that water supply and allocation problems exist throughout the State and are not confined to any geographical section; and

WHEREAS, the State Water Study Commission has observed that many of the present laws, doctrines, policies and administrative practices of the Commonwealth applicable to the use and allocation of the water resources of the Commonwealth may be inadequate to assure economically, environmentally and socially effective management; and

WHEREAS, there exist critical present and potential water shortages in various areas of the Commonwealth; and

WHEREAS, although the Commission worked diligently, much work remains to be done; now, therefore, be it

RESOLVED by the Senate of Virginia, the House of Delegates concurring, That the State Water Study Commission is hereby continued. the Commission shall continue its study and shall thoroughly analyze the water supply and allocation problems of the entire Commonwealth, making such recommendations, including legislation, as it deems necessary and advisable. The State Water Control Board is directed to provide staffing and such other assistance as is deemed necessary by the Commission in order to complete its task. All agencies of the State shall assist the Commission upon request.

The Commission shall be composed of fourteen members to be appointed as follows: the Committee on Privileges and Elections of the Senate shall appoint five persons from the membership of the Senate; the Speaker of the House of Delegates shall appoint five members from the membership thereof; and the Governor shall appoint four persons from the State at large. If a vacancy occurs for any reason, it shall be filled in the same manner as the appointment of the original member. When filling appointments, the appointing authority shall recognize that the water supply and allocation problems are interrelated and are Statewide in scope rather

than being confined to any specific region or area.

All members of the Commission shall be entitled to such compensation as is set forth in § 14.1-18, to be determined by the Chairman, for each day or part thereof devoted to their duties as members of the Commission. In addition to such compensation, all members shall be reimbursed for the actual and necessary expenses incurred in the performance of Commission duties. Funds required to accomplish the purposes stated herein shall be taken from appropriations made to the State Water Control Board.

The Commission shall conclude its study and make its report to the Governor and General Assembly not later than December one, nineteen hundred seventy-eight, and shall set forth therein such measures as will promote the public interest and be conducive to the needs and well-being of the Commonwealth.

COMMENTS

UPON AND DISSENTS AS TO PORTIONS OF

THE REPORT

OF

THE STATE WATER STUDY COMMISSION

DELEGATE GLENN B. McCLANAN.

In the words of Governor-Elect John N. Dalton, "We must plan for the best use of all our resources, and water is one of the most vital resources...We must plan for the future so that no region of the state is faced with water emergencies in the years ahead...We are not going to rob Peter to pay Paul, but we can't let Paul die of thirst." The Commission concluded that several attractive and viable alternatives for solving the water supply and allocation problems in both geographical areas would require export of water for use outside the river basin from which withdrawn."

Accordingly, it is obvious that the Commonwealth must proceed without further delay to adopt a water withdrawal permit system to equitably allocate water, while providing protection to those Virginians residing in water affluent areas.

I endorse with enthusiasm the Commission's recommendation that accurate and adequate ground water inventory and exploration programs proceed forthwith in both water affluent and water short areas of the State. Where necessary, I agree that outside consulting services should be used to gather the data necessary to determine the quality and quantity of available water from underground sources.

Also, I enthusiastically endorse the recommendation that we proceed in both Northern Virginia and Southeastern Virginia to identify, inventory, and where possible, utilize existing reservoirs, quarries and other storage facilities to augment available water supplies.

Further, I warmly support the recommendation that the Southeastern jurisdictions should work together to manage regional water supplies during water shortage emergencies and that finished water inter-connections between adjacent utilities should be constructed to serve as a back up supply during emergencies.

Lastly, I agree that local governments should be given authority to work toward reducing per capita water demand by amending plumbing and building codes to allow the use of water saving devices and appliances in

new construction, if the water saving devices and appliances are designed so as to accomplish their intended purpose with the same basic efficiency as existing devices and appliances.

