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REPORT ON CONSOLIDATION OF WATER AND SEWERAGE CONTROL

MADE TO

GOVERNOR A. HARRY MOORE

BY THE

**NEW JERSEY STATE
WATER POLICY COMMISSION**

December 5, 1934

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Hon. A. Harry Moore,
Governor of New Jersey,
State House, Trenton, New Jersey.

Dear Sir:—

The accompanying report conveys our views on the subject of consolidation of the several district and State boards and commissions having authority in water and sewerage matters.

We recommend that water interests and sewerage interests be kept separate.

We recommend practically complete consolidation of water interests.

The latter would be accomplished through creation of a "New Jersey Water Authority" to take over the functions of the State Water Policy Commission, the functions of the North Jersey District Water Supply Commission except those required for completion of Wanaque and its continued operation for the time being, and the functions of the Passaic Valley Water Commission pertaining to the development of new sources of supply. The Bergen County Water Commission would be discontinued.

The report and proposed draft of legislation to make it effective contain a plan of financing the "Authority", based on the Allegheny County Authority (Pennsylvania) and the Port of New York Authority Acts.

The members of the "Authority" would be five in number, four representing Water Supply Districts and one the State-at-large. We believe they should be paid for their services.

We recommend that steps be taken by the "Authority", if created, to secure Federal aid with which to begin a new reservoir for the northern metropolitan counties.

Respectfully submitted,

STATE WATER POLICY COMMISSION.

Max Grossman, Chairman
George S. Burgess
Thomas G. Coulter
Francis V. Lowden
Thurlow C. Nelson

REPORT ON CONSOLIDATION OF WATER AND SEWERAGE CONTROL

*Made to Governor A. Harry Moore by the
State Water Policy Commission, December 5, 1934*

Centralization of responsibility for the water supply of the State is urged, but the combination of water supply control with that of sewerage disposal is not deemed advisable at this time. Consolidation is not a guarantee of efficiency and should never be carried beyond the point of easy and effective administration. There is no pressing need for even the merging of all the sewerage units. In fact, advance in scientific methods of treatment through local disposal plants may warrant wider decentralization of sewerage undertakings.

The water supply situation is quite different. There should be no monopolies of vital water resources, either public or private, that restrict their use to a limited number of municipalities. All the water should be available to all the people. We deem this a fundamental principle the State ought to assert. Excellence of pioneer accomplishments through independent undertakings merits appreciation and special consideration, but should not stand in the way of this principle.

° The object of the set-up proposed is adequate water at less money to the consumer. The Commission recommends:

RECOMMENDATIONS

1. Concentration of the following within one body to be known as the "New Jersey Water Authority":

(a.) The powers and duties now exercised by the State Water Policy Commission.

(b.) The powers pertaining to new projects and control over allocation of waters, as vested in district commissions and actually exercised by the North Jersey District Water Supply Commission.

(c.) Power to acquire public water supply systems and private water companies necessary to a unification of systems that now, or should, furnish water to groups of municipalities. Negotiations should be initiated by the Authority for the acquisition at once of all primary water supplies in the northern metropolitan counties. Water supplies yielding more than 15,000,000 gallons daily are classified as "primary". All between 15,000,000 and 1,000,000 gallons daily are classified as "secondary". The latter would not be brought into the general system for the present unless admission is sought by present owners and the necessity is obvious to the Authority.

Protection of municipalities is intended against the sacrifice, through acquisition by the Authority, of any portion of the value of their investment. A municipality serving its people at lower rates would not be asked to stand for high rates to make up for deficiency in past management of systems with which its system might be combined.

(d.) Authority for new construction of major water supplies, including planning, financing and construction, and their subsequent maintenance and operation.

(e.) The Authority should have control over sanitary conditions in developed watersheds, in so far as this right does not infringe upon existing powers of the State Department of Health.

2. That coincident with the creation of the Authority, the State Water Policy Commission be discontinued; the North Jersey District Water Supply Commission remain only as the agent of the municipalities interested in the Wanaque, to complete and operate the latter subject to the will of the contracting parties; that the construction powers of the Passaic Valley Water Commission, as applied to new sources, be transferred to the Authority. The Passaic Valley Water Commission would be continued as an operating body for Paterson, Passaic and Clifton as though these municipalities were one. The Bergen County Water Commission would be discontinued.

The purpose of these recommendations is to center responsibility for the planning, development and operation of an adequate water supply for all parts of the State. The Authority would furnish water at wholesale rates to municipalities served. Municipalities would then sell and distribute to local consumers.

MEMBERSHIP OF PROPOSED AUTHORITY

The Commission has considered numerous ideas as to how such a body as a Water Authority should be constituted. The conclusion is reached that it should comprise five members who should be paid for their services. The logical basis of selection seems to be that of the natural break-down of the water supply problems within the State.

There is a heavily populated section in the northeastern area where the water supply question is the most intricate and acute. The section requires now, and will continue to require perhaps indefinitely, most consideration. It has the most at stake. The counties of Bergen, Hudson, Passaic, Essex, Union and Middlesex comprise this section. The designation of these counties as Water Supply District No. 1 is recommended. Representation by two members of the Water Authority is proposed.

The counties of Mercer, Burlington, Camden and Gloucester have a present investment and a particular interest in the Delaware River

as a source of water supply. Designation of this section as Water Supply District No. 2 is recommended. Representation by one member of the Water Authority is proposed.

The counties bordering on the Atlantic Ocean have a water supply problem very different from that of other portions of the State. These counties are Monmouth, Ocean, Atlantic and Cape May. To them should be added the counties of Cumberland and Salem, where artesian wells and streams in sand areas furnish the water in use or likely to be used in the distant future. Designation of this section as Water Supply District No. 3 is recommended. Representation by one member of the Water Authority is proposed.

The balance of the State has a decided interest in the use of the potable waters, but it is concerned more with the preservation of its streams and lakes than with the development of water supplies for its own use. Parts of Morris and Somerset counties have water supply interests that are closely allied with those of the counties in District No. 1. The greater portion of these two counties, however, and most of Warren, Hunterdon and Sussex counties, are interested mainly in the preservation of their waters. Therefore these five counties do not seem to constitute a natural Water Supply District and it is recommended that there be one member of the Water Authority to represent the State-at-large, who might be appointed from these counties, or from one of the three constituted water supply districts, if the personnel of the Authority or current needs make it seem best.

The Commission recommends that the members of the Water Authority be appointed by the Governor, by and with the advice and consent of the Senate. In order that a continuous plan of procedure may be inaugurated undisturbed by considerations of reappointment, it is recommended that each of the five original members of the Authority be appointed for a term of five years. Thereafter, appointments would conform to the plan set forth in the draft of a bill to supplement this report.

CENTRALIZATION OF POWERS

Along with powers of construction and interconnection, the Authority is given the State-wide duties of allocation of water diversion rights, approval and supervision of construction of dams, protection of rivers against encroachments aggravating flood conditions, and continuance of the recording of stream flow and other scientific work now pursued in conjunction with the United States Geological Survey. These are functions of the State Water Policy Commission. They have been transferred about from one supervising body to another for 27 years. They may properly rest with the Authority. Less overhead

and fewer engineers will be the result of placing all of these responsibilities together.

Allocation of water and construction of water supply systems are looked upon by some engineers as functions that should be kept apart, on the premise that the former should be vested in a body that would act as a check on construction projects. Experience in New Jersey, where there has been first separation, then an overlapping of this authority, convinces us that it is unnecessary and undesirable. A single State-wide authority in an area as small as New Jersey, with the capital city so quickly accessible to all sections of the State, can discharge every obligation connected with water supply development and administration. In allocating the diversion of surface waters, the Director of the State Department of Health should sit and advise with the Authority.

In any event, concentration of duties in one body will eliminate the haggling and discord between agencies that have been going on so long. Conflicting authority, and the indifference of far-seeing municipalities to the welfare of those that have been slow-acting, have done much to cause the illogical and hit-or-miss water supply development of such counties as Essex, Passaic, Hudson, Union and Bergen. The cost has been too heavy.

DISTRICT ONE REQUIREMENTS

Early simplification of the means of water supply control is imperative to the future of District One. There is a substantial job ahead for the next five years to bring about necessary interconnections, readjustments of administration of the 32 separate water systems, and the choice and execution of a plan for an additional reservoir with transmission pipe lines.

Interconnection of local and group-owned systems should be undertaken as promptly as possible. Present sources of supply are capable of considerable further development. How much, cannot be said with certainty in light of present unknown factors. Engineers differ as to the extent it is feasible, but agree that it would take years to negotiate and effect interconnections between enough municipal and private delivery systems to meet probable exigencies.

Water is interchanged considerably now, but chiefly between adjacent systems. There is no general intersectional pooling. In a measure, pooling has been retarded by the knowledge that some developed sources are undesirable and, with increased pollution, must sooner or later be abandoned. Efforts to interchange these with uncontaminated sources have rightfully met with resistance. Many public and private interests must be harmonized and progress with interconnections and enlargements is sure to be delayed even under the most effective direction

of water control. Many municipalities in the district will be hard pressed for enough water to supply their inhabitants after 1945. Some will suffer before 1940 if there is a marked upturn in business. Others should have more and better water at once.

DATA ON SUPPLY AND DEMAND

There are 24 publicly and 8 privately owned water supply systems in Bergen, Hudson, Passaic, Essex, Union and Middlesex counties. There are 13 surface sources of supply that delivered an average of 214,000,000 gallons daily in 1933. There are 24 underground sources (including 5 that are both surface and underground) that delivered an average of 41,000,000 gallons. The total average daily consumption in 1933 was 255,000,000 gallons.

The maximum average daily consumption of record for a year was 237,000,000 gallons (surface) and 52,000,000 gallons (underground). Total 289,000,000 gallons. That record was in 1929. Daily consumption to October, 1934, was up to 267,000,000 gallons and is steadily rising.

The maximum theoretical yield of all sources with recent additions is 408,000,000 gallons. Absence of interconnections reduces the yield available in dry periods to 368,000,000 gallons. Contamination of supplies and abandonment of obsolete equipment in certain instances further reduces the margin between supply and demand. With resumption of the trend prior to 1929, demand would catch up with the available supply before 1945.

Industrial plant capacity of these counties exceeds that of 1929. Complete resumption of the use of this capacity is hopefully anticipated. Vast railroad improvements indicate the expectation. If it takes place at an early date a new source of water supply cannot be provided too soon.

NEW RESERVOIR FOR DISTRICT ONE

This means that construction of a new project should be begun as early as 1936. One might be built and placed in operation within a five-year construction period, but unforeseen difficulties always arise. On a five-year basis 1940 would be soon enough, but it is best to err on the safe side—if error there must be—and have the construction completed a few years before the need becomes pressing. Rushing completion of a reservoir is extravagant.

Another reason of unusual importance for beginning the project promptly is the heavy burden of unemployment relief. The Federal government will authorize large additional sums for construction projects in 1935. It will be money-saving in the end to build now rather than wait two to five years. Building with Federal aid will overcome

in large measure the difficulty of financing. It will be a means of affording thousands of unemployed an opportunity to earn their living.

Selection of the site for the next large reservoir should be left to the Authority, subject to the approval of the Governor, or of the State House Commission. The latter may be preferable, since it comprises the Governor, State Treasurer, State Comptroller and the Chairmen of the Appropriations Committee of both the Senate and the Assembly. The State Water Policy Commission has voluminous engineering data on water sites. Some additional information was acquired during the study for this report. The North Jersey District Water Supply Commission has much material. All of this will become available to the Authority, if created.

FINANCING

There is no power lodged in any present district or State agency to avail itself of Federal aid. The "Authority" recommended is a prerequisite to National Industrial Recovery Administration financing.

The "New Jersey Water Authority", under the proposed draft of legislation, would become a quasi-public corporation whose debts would be independent, and not an obligation, of the borrowing power of the State.

Hence its functioning would not be affected by the Constitutional debt limitation. The Authority would amortize its debts from revenues obtained by wholesaling of water and operation of water supply systems coming within the limitations cited elsewhere in this report. Debts and expenses of the Authority, except those allowed by the Legislature in order to begin its existence, would not require the levying of taxes. The Water Supply Fund, which now pays most of the expenses of the State Water Policy Commission, should be applied to the use of the Authority.

The Authority would have the power to construct, maintain and operate water supplies, including improvements thereof and additions thereto, and to charge and collect fees or rentals in connection with the use of water supplied by such projects. Necessarily, proceeds must be sufficient to cover new undertakings, operation of existing plants acquired, and the administration costs of the Authority.

Financing by the Authority is patterned after the Pennsylvania Act creating the "Allegheny County Authority" and the Port of New York Authority Act. Allegheny County is territorially the City of Pittsburgh. The validity of the Pennsylvania legislation has been sustained by the courts and recognized by the Federal government. Under the National Industrial Recovery Act the Port of New York Authority has financed the Weehawken Tunnel and the Allegheny

Authority has secured funds for a program of public works to cost \$30,000,000.

Reasons for the Pennsylvania legislation were akin to those that compel special action in New Jersey. The amount of money to be borrowed was largely in excess of the borrowing margin of the County, except with the consent of the electors. The electors would not have approved a large increase in the bonded debt of the County if amortized through taxation. So a separate public corporation was created to make the improvements and pay for them through the issuance of revenue bonds guaranteed by the self-liquidating character of the improvements. The principle is much the same as that of the Port Authority.

SEWERAGE

The Enabling Act, Chapter 36, New Jersey Laws, Session of 1899, provided for a joint meeting of two or more municipalities for the construction and maintenance of a trunk sewer. In the same year an act (Laws of 1899, Chapt. 41) was passed to secure the purity of the public supplies of potable water in this State. Three years later the Passaic Valley Sewerage District was created and a general act passed authorizing the appointment of sewerage commissioners.

Four Joint Meetings have been established under the provisions of the Enabling Act of 1899:

1. Joint Meeting in the matter of an outlet sewer for the municipalities of East Orange, Hillside, Irvington, Maplewood, Millburn, Newark, Roselle Park, South Orange, Summit, Union Township, West Orange, draining into the Elizabeth River.

2. Rahway Valley Joint Meeting for the construction of a joint trunk sewer and disposal works for Rahway, Westfield, Cranford, Springfield, Woodbridge, Kenilworth, Garwood, Roselle Park, Clark Township.

3. Second River Joint Meeting for municipalities in the basin of this stream which are also in the Passaic Valley Sewerage District. Effluent is discharged into the Passaic Valley trunk sewer.

4. Third River Joint Meeting serving municipalities in the basin of this stream and discharging into the Passaic Valley trunk sewer at the junction of the Third River with the Passaic.

The Hackensack Valley Sewerage Commission, recently organized, has not yet become active in the solution of sewerage problems in that drainage area.

An important act (Laws of 1909, Chapt. 253) forbids the distribution or sale for potable purposes of water which does not meet sanitary standards set by the State Department of Health. This department is given supervision over the operation of all water plants of the State

with respect to the purity of the water.

By this act and through subsequent legislation, the control of the purity of public supplies of potable water has become a fully recognized responsibility of the Department of Health. The sewerage commissions afore mentioned, save only the Passaic Valley Sewerage Commission, are likewise accountable to the Department of Health for the maintenance of sanitary standards. There has thus grown up through the years a general sanitary supervision over water supplies and over sewage by the Department of Health which has given this State an enviable record of freedom from typhoid fever or other enteric disorders.

Agitation to combine control of sewerage and potable water in one body is not new. In 1917 Governor Edge appointed a commission to inquire into the practicability of consolidating the functions of the North Jersey District Water Supply Commission and the Passaic Valley District Sewerage and Drainage Commission under the control and authority of one State board. This commission found that construction of the Passaic Valley trunk sewer was still under way and recommended that no consolidation be attempted at that time.

Testimony presented before this Commission during the present study was largely against consolidation of control of sewerage and of potable water systems in one State body. The more important reasons may be summarized as follows:

1. Sewerage problems fall naturally into drainage areas involving municipalities situated along one stream. A water supply may be brought from a distance to supply several municipalities lying in different drainage basins.

2. Approximately two-thirds of the water supplies of the State draw upon underground sources, which are mainly unaffected by the degree of stream pollution.

3. Consolidation of water and sewerage control boards would effect no real economies or increase in efficiency because:

- (a) The technical staffs must be different for the handling of water supply and of sewerage problems;

- (b) The development of the two problems has been different;

- (c) Construction and maintenance of sewers and of sewerage works are essentially municipal problems requiring the attention of local authorities who must deal directly with the taxpayer. Even though a State body were created the local organization could not be dispensed with. Sewerage facilities are financed through taxation, not from direct income as are water supplies.

- (d) The maximum of efficiency and of home rule is attained with

a minimum of expense through local sewerage boards composed of municipal officers. The pollution of streams and of coastal waters, and the fixing of sanitary standards for water supplies and for sewage effluents are State functions properly vested in the Department of Health. There is no need for any other State agency for the control of sewage.

4. Some of our most pressing sewerage problems involve the Hudson and the Delaware Rivers. Solution of these difficulties can be accomplished only through inter-state cooperation, involving long delay.

APPRECIATION

The State Water Policy Commission is indebted to many public-spirited citizens of New Jersey for whole-hearted assistance and candid advice. Those who sat with us were:

Frank H. Sommer, former Chairman, North Jersey District Water Supply Commission.

Spaulding Frazer, former Counsel, North Jersey District Water Supply Commission.

Frank Bergen, President, Plainfield-Union Water Company and Middlesex Water Company (since deceased).

Nicholas S. Hill, Jr., President, Hackensack Water Company.

Cornelius C. Vermeule, Consulting Engineer.

Russell S. Wise, Engineer, Passaic Valley Water Commission.

John I. Hagens, Auditor, Passaic Valley Water Commission.

Peter F. Daly, Chairman, Hackensack River Sewerage Authority.

Frank B. Chapman, Hackensack River Sewerage Authority Commissioner. •

Col. Hugh A. Kelly, Engineer, Hackensack River Sewerage Authority.

Welcome W. Bender, Chairman, Union County Municipal Water League and Elizabeth Water Commission.

Thomas E. Collins, Elizabeth City Engineer.

Thomas A. Faughnan, Secretary, Union County Municipal Water League and Elizabeth Water Commission.

S. F. Newkirk, Engineer and Superintendent, Elizabeth Water Commission.

Clyde Potts, Consulting Engineer, member State Board of Health.

John Kean, President, Elizabethtown Water Company, Consolidated.

Louis Auerbacher, Jr., Counsel, Passaic Valley Sewerage Commission.

J. Ralph Van Duyne, Chief Engineer, Passaic Valley Sewerage

Commission.

Joseph H. Quigg, Secretary-Treasurer, Passaic Valley Sewerage Commission.

Arthur L. Sherman, former Deputy Chief Engineer, State Water Policy Commission.

Dr. Henry B. Kummel, Director, Department of Conservation and Development.

Dr. Willem Rudolfs, State Experiment Station.

Harry P. Croft, Chief Engineer, State Department of Health.

To these who communicated their views by letter we express our appreciation:

Charles H. Martens, Mayor of East Orange.

Dr. Alfred W. Ward, Chairman, Bergen County Water Commission.

Edward S. Rankin, Secretary, Second River Joint Meeting.

Roger C. Aldrich, Chairman, Rahway Valley Joint Meeting.

Edward P. Johnson, Lawyer, Somerville.

Samuel S. Kenworthy, Executive Secretary, New Jersey State League of Municipalities.

Gerald W. Knight, Chairman, and the Engineering Advisory Committee, New Jersey State League of Municipalities.





