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THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

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A Report on its
ACTIVITIES AND ACCOMPLISHMENTS

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June, 1943

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THE INTERSTATE COMMISSION
ON THE DELAWARE RIVER BASIN

PHILADELPHIA, PENNSYLVANIA

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The activities reported upon in this brochure necessarily have been presented in summarized form. They illustrate the principles for which Incodel was organized and the objectives to which this joint governmental agency of the States of Delaware, New Jersey, New York and Pennsylvania is devoting its attention and efforts. More detailed reports upon each of the subjects covered herein, and upon other activities of the Commission, are available in its offices. Many of these are in reproducible form and will be furnished to any one interested, upon request. All may be consulted and reviewed with members of the staff at any time.

CONTENTS

FOREWORD 6

A MORE PERFECT UNION

The Delaware River Basin States in 1786 8
Council of State Governments in 1935 9
Interstate Cooperation Commissions in 1936 11

INCODEL

Organization 13
Membership 14
Advisory Committees 18
Meetings and Conferences 21

INCODEL ACTIVITIES

Programs and Policies, Budget, Staff 24
Stream Pollution 27
Water Supply 29
Recreation 30
Multiple Purpose Reservoirs 31
Salinity in the Delaware 32
The New Jersey Canal 33
Water Conservation 34
Postwar Preparedness 35

APPENDIX A

Stream Pollution 37

APPENDIX B

Water Supply Diversion 47

FOREWORD

THE fiscal year ending June 30, 1943, marks one of the most important milestones in the history of the Interstate Commission on the Delaware River Basin. During a year in which all of the people of all the great and powerful nations of the world were locked in deadly combat in a terrible global war, the people at home in the States of New York, New Jersey, Pennsylvania and Delaware, thinking also of the future, were quietly, and effectively, consummating policies and agreements so that they, and the generations to follow, might mutually and peacefully use, protect and enjoy the natural resources of the Delaware River Basin.

The outstanding accomplishment of the year was the enactment of reciprocal legislation in the States of New York and Pennsylvania whereby litigated controversies over the sharing of the common natural "treasure of life" – the waters of the Delaware River Basin – would be virtually outlawed. The same water supply diversion bill awaits the approval of the legislature in New Jersey which is now in recess. Its unanimous adoption by the three states constitutes positive proof of the acceptance of the policy of cooperative interstate negotiation, rather than competitive interstate litigation, for the adjustment of questions regarding the respective rights and responsibilities of the participating states in the use of the waters of the Delaware River Basin.

Although operating with a greatly reduced staff and budget because of the war, the Commission's other accomplishments for the year "measure up" to the standards of previous periods.

In the first quarter it successfully completed the management of the campaign for the conservation of municipal and industrial water supplies in the Philadelphia five-county war production area. This program was initiated in May, 1942, during the previous fiscal year. It was keynoted with the slogan, "Water Wins Wars!"

Under date of October, 1942, the Commission issued an impartial and comprehensive report presenting the results of its survey of the proposal which is now before Congress to construct a canal across the State of New Jersey between Bordentown on the Delaware River and Sayreville on Raritan Bay. The Commission takes the position that since this project could not be completed in time to be useful during the present war that it should not be authorized until the states and regions affected are afforded an opportunity to suggest revisions which will overcome certain undesirable features of the proposal as now advanced.

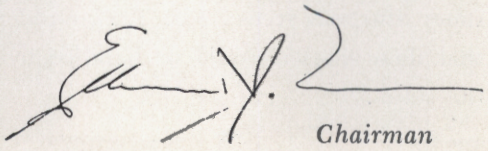
During the year the office brought its investigation regarding the development of multiple purpose reservoirs on the Delaware River to a tentative conclusion. Conferences have been held with representatives of interested water supply and water power agencies and the survey has been favorably received.

The periodic occurrence of salt water in the lower Delaware River during periods of drought with its damaging effect on the sources of industrial and municipal water supplies for the areas lying between Philadelphia and Marcus Hook also was a subject of special attention. A report completed in the latter part of the fiscal year presents a complete analysis of this problem. It suggests a practical method for its correction which may well be adopted for postwar construction.

As the fiscal year ends, the Commission again is actively participating in the war-time extension of its previous year's campaign for the conservation of water.

For the future, the Commission envisages an opportunity to render valuable service in coordinating the activities of the states and their municipal subdivisions in the conservation of the resources of the Delaware River Basin, particularly in preparation for, and during, the period of postwar rehabilitation and development. Because of the "priority" demands for material and manpower for the prosecution of the war, programs for the construction of sewage and industrial waste treatment plants and for the correction of the silt problem in the Schuylkill watershed, of necessity, have been delayed. The Commission now is preparing to develop a construction program for such of these projects as are necessary for the proper control of stream pollution. This work will occupy a prominent position in the postwar development of the Delaware River Basin.

Just before the fiscal year ended five new members were appointed to the Commission: Hon. Floyd Chalfant, Secretary of the Department of Commerce in Pennsylvania; Hon. Franklin H. Lichtenwalter, Majority Floor Leader in the House of Representatives in Pennsylvania; Hon. George P. Edmonds from the Senate in Delaware; Hon. George R. Clark from the House of Representatives in Delaware; and Hon. Duane E. Minard, Jr., from the House of Assembly in New Jersey. To them and to the other incoming members to be appointed from Delaware and New York, the Commission extends its most hearty welcome.



Chairman

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The Delaware River Basin States in 1786



The Delaware River Basin states are four of the most progressive states in the entire country. New York, New Jersey, Pennsylvania and Delaware, out of which the Delaware Basin is formed, always have been the pioneers in movements leading to the creation and the realization of the "More Perfect Union."

History shows that events leading to the adoption of the Constitution, an undertaking which has set the pace for governmental thinking and action throughout the world, were pioneered by these four states. In 1786, three years before the Constitution went into effect, a meeting had been scheduled in Annapolis at which delegates from the thirteen original colonies were to consider methods by which the states could operate with greater harmony. Delegates, however, from only the Delaware Basin States appeared and the meeting could not be carried out as planned. But, undaunted, these delegates set to work and, as a result of their deliberations came the recommendation to hold the convention at Independence Hall, Philadelphia, at which the Constitution was framed.

Back in those early days our present means of communication and transportation were unthought of, life was simple, and the problems of government not complex. The latter fell into two major classifications. First, there were those problems primarily local in nature and contained within state boundaries. The Constitution provided that jurisdiction over these should be retained by the individual states. Second, were the problems which affected all of the states. Jurisdiction over these was delegated by the states to the federal government. A third set of conditions involving problems which would concern a group of states also was recognized. The founders of our democracy provided that these matters could be handled by compact or agreement among the states.

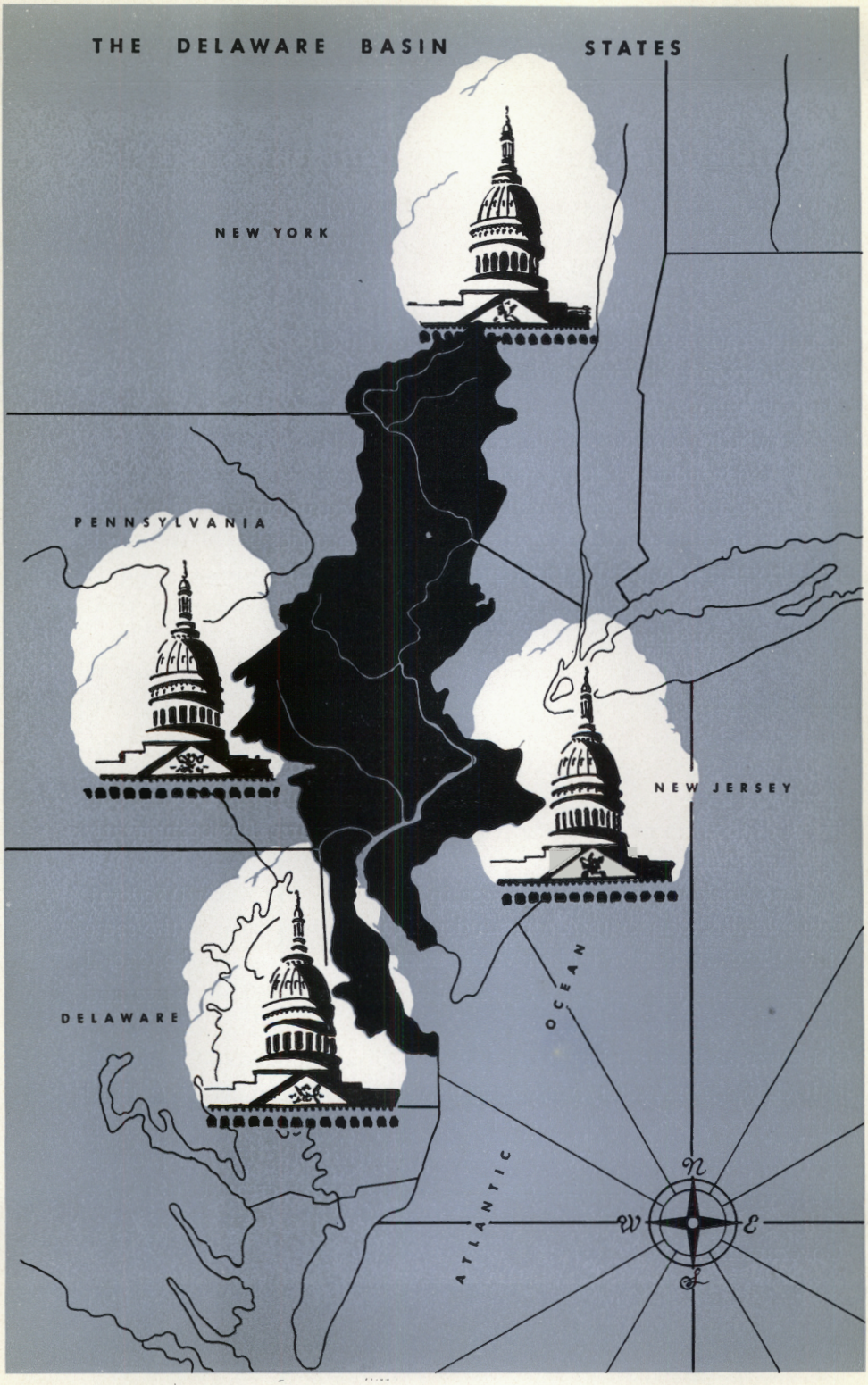
Council of State Governments in 1935

State governments functioned reasonably well under the principles of the Constitution for more than a century. Then came, in rapid succession, startling improvements in transportation and communication and the phenomenal growth of community and business units. These developments brought on new times and new conditions under which the states no longer could be relatively independent. Safety and prosperity now, in every state, came to depend more and more upon conditions and practices in other states. Here is where new difficulties began, for it was found that in thousands of instances the laws of states were in conflict; their practices, discordant; their regulations, antagonistic; and their policies, competitive.

The result of such disharmony was inevitable. The federal government began to take over more and more control from the states, as evidenced by the almost constant passing of functions from states' government to the federal government during the past fifty years. This trend was particularly noticeable during the years just prior to the outbreak of the present world-wide conflict and, of course, has been greatly accelerated since then.

Many students of government see in this movement toward Federalism a decided danger to American democracy and morale. At the same time, there are others who believe the transfer of functions to the federal government is the only way in which to avoid a "return to horse and buggy days" and chaos.

Return to horse and buggy days versus dictatorship would be a difficult choice. Fortunately we do not have to make it. There is a third alternative—cooperative action by the states wherever their interests are common. Recognizing this situation and with the view of promoting the policy of interstate cooperation, there was created in 1935 a public administration organization known as the Council of State Governments.


THE DELAWARE BASIN STATES
NEW YORK
PENNSYLVANIA
NEW JERSEY
DELAWARE
ATLANTIC OCEAN
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Interstate Cooperation Commissions in 1936

As an outgrowth of the activities of the Council of State Governments all of the forty-eight states but four have authorized by legislative action the organization of Commissions on Interstate Cooperation. It is expected there soon will be such a commission in every state of the Union. These commissions operate in a score of broad fields for the development of greater governmental harmony and cooperation among states. To cite a few examples, they are engaged in studying and solving such problems as taxes, criminal law, governmental policy toward social usages, liquor control, trade barriers, the protection and control of natural resources, postwar planning and many other fields.

The Commissions usually are composed of fifteen members, five from each of the two branches of the legislature, the Senate and the House of Representatives, and five officials of the State government appointed by the Governor.

Authority is granted to each Commission to establish such committees, as is deemed advisable, to conduct conferences and to formulate proposals concerning the various subjects of inter-governmental cooperation. State officials who are not members of the Commission may serve on such committees.

New Jersey, New York, Pennsylvania and Delaware, quickly visualizing the merits of this movement, were among the first states to create interstate cooperation commissions. In 1936, delegates from these states held a conference in Philadelphia to decide upon a program to which they should direct their attention and energy. They agreed, among other things, that one problem required special and unusual attention – the problem of cooperatively developing a policy and program for the coordinated conservation and wise use of the natural resources of the Delaware River Basin. As a result of this idea, birth was given to the *Interstate Commission on the Delaware River Basin popularly known as Incodel.*

Delaware New Jersey New York Pennsylvania

IN WHICH IS LOCATED

THE DELAWARE RIVER BASIN

HAVE EACH CREATED A

COMMISSION ON INTERSTATE COOPERATION

THESE AGENCIES HAVE JOINTLY ORGANIZED

THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

INCODEL

WHICH THROUGH ITS

TECHNICAL ADVISORY COMMITTEES

QUANTITY

QUALITY

RESEARCH

PLANNING

AND

STAFF

IS DEVELOPING

PRACTICAL PROGRAMS FOR THE USE OF THE NATURAL RESOURCES OF THE BASIN

Organization

The Incodel pattern of organization was adopted with the view of developing, and assisting in the execution of, coordinated and practical policies and programs for the conservation and wise use of the natural resources of the Delaware River Basin. It has sought to accomplish this objective efficiently and economically. Essentially, it is a service organization which does not, in any way, seek to usurp the legislative, administrative or executive functions of existing state agencies.

The present organization comprises:

1. The Commission, which until June, 1943, consisted of sixteen members, four from each of the four states in the area. Each group of four members is appointed by the states' Interstate Cooperation Commission and includes one State Senator, one member of the House of Representatives, one administrative official, and either the Chairman or the Director of the state planning agency. In order to assure a better continuity of membership, the future Commission will include a fifth member from each state. This member will be selected by the Commission as a group.

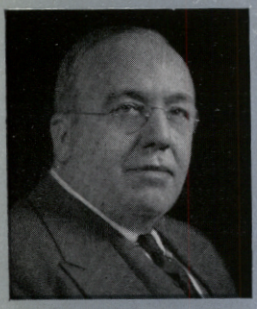
2. Technical Advisory Committees, consisting of groups of officials from each of the states who are expert in such fields as Water Supply, Stream Pollution, Planning, Research, Education, Industry and Finance.

3. A Central Staff, which under normal peace-time conditions included an executive secretary, a chief engineer, four engineering assistants and draftsmen, and two stenographers.

The staff provides for a continuous correlation of activities, a most important function in the formulation of practical programs. It discloses opportunities for cooperative effort, and provides a clearing house in which existing information and facilities may be correlated and utilized without conflict or duplication.

Working under the general guidance and inspiration of the individual members of Incodel and of its technical advisory committees, the organization has access to the combined facilities and technical resources of the participating states and to those of federal agencies operating within the region.

INCODEL MEMBERSHIP • *Pennsylvania*



HON. ELLWOOD J. TURNER, *Chairman,* was a member of the Pennsylvania House of Representatives from 1924 to 1942. In 1939 he was elected Speaker and in this capacity instituted many outstanding reforms. Mr. Turner, an attorney by profession, has sponsored numerous measures for the improvement of governmental administration. Elected to the Board of Managers of the Council of State Governments in 1937, he served as its Chairman in 1940.



HON. WELDON B. HEYBURN, *Member,* has been a member of the Pennsylvania Senate since 1936 and now is majority floor leader of that branch of the Legislature. A farmer by occupation, Senator Heyburn —a true friend of the land—has taken a keen interest, and been a leader, in many movements for the promotion of progressive and modern measures for the conservation of the soil, the streams, and other natural resources.



HON. MARK S. JAMES, *Member,* is Executive Director of Pennsylvania's Postwar Planning Commission. Prior to that he was Secretary of the Pennsylvania Department of Commerce from 1941 to 1943 and Deputy Secretary from 1939 to 1941. An industrial engineer, Mr. James, even before Pearl Harbor, was engaged in coordinating Pennsylvania's industrial activities with the needs for the national defense program of the nation.



MR. FRANCIS A. PITKIN, *Member,* has been Executive Director of the Pennsylvania State Planning Board since 1936, and was Assistant Director from 1934 to 1936. Mr. Pitkin, an engineer by training, is recognized as an authority in the field of practical planning. He is a member of the Council of State Governments' Postwar Planning Committee, chairman of the Pennsylvania Recreation Council, and member of numerous other public service agencies.

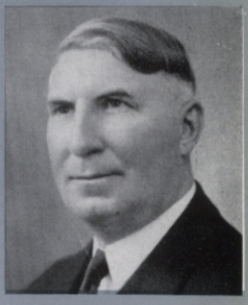
New York • INCODEL MEMBERSHIP



DR. MARTIN P. CATHERWOOD, *Member,* was appointed Director of the newly-organized Division of Commerce of the State of New York in 1941 and was previously Chairman of the Planning Council of that state. Dr. Catherwood is a recognized authority on business management and public administration, has attained many honors for his accomplishments in this field and is a professor in this subject at Cornell University.



HON. GEORGE W. FOY, *Member,* has been an Assemblyman in the State of New York representing the First District in Albany County since 1936. Assemblyman Foy also has served as Deputy County Attorney of Albany County. While he takes a keen interest in all legislative proposals he has been particularly active in the sponsorship of measures for the improvement of insurance and banking regulations.



HON. JOHN S. THOMPSON, *Member,* has been in the New York State Assembly since 1930 and has served as chairman and member on many important legislative committees. A soldier by profession, he retired in 1937 with the rank of major general after thirty-nine years of military service. During this career, General Thompson gained the unusual distinction of having filled every rank from private to major general.



HON. EARLE S. WARNER, *Member,* has been a member of the New York State Senate since 1933. Senator Warner has been the sponsor of many progressive legislative measures including the establishment of the Joint Legislative Committee on Interstate Cooperation. He has been the Chairman of the New York State Flood Control Commission since 1939 and is also chairman of numerous important senatorial committees.

INCODEL MEMBERSHIP • *New Jersey*



HON. ROBERT C. HENDRICKSON, *Vice Chairman,* a Major in the United States Army, became Treasurer of the State of New Jersey in 1942 after having served in the Senate since 1934. Majority leader in 1938, president from 1939 to 1942, he is one of the state's authorities on taxation. He is on the Board of Managers of the Council of State Governments, and was its chairman in 1941.



DR. CHARLES P. MESSICK, *Member,* is Chief Examiner and Secretary of the New Jersey State Civil Service Commission and has been with this agency since 1910. An authority on public personnel problems he has been engaged as a consultant in this field by many agencies in the United States and Canada. Dr. Messick has been Chairman of the New Jersey State Planning Board since 1934.



HON. JOSEPH C. PAUL, *Member,* is Secretary of the New Jersey Commission on Interstate Cooperation and was a member of the State Legislature in 1935, 1936 and 1938. Mr. Paul, an attorney by profession, is Chairman of the Legislative Committee of the New Jersey State Bar Association, and also an officer and member of other state and county legal associations and societies.



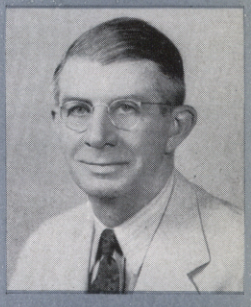
HON. JOHN G. SHOLL, *Member,* was elected to the New Jersey Senate in 1942 after five years of previous service in the House. Prior to 1937 he devoted many years of public service to municipal and county government. In the Legislature, he has sponsored important measures for the "freezing" of state aid allotments to local governmental agencies for use in the postwar period.



MR. RICHARD C. BECKETT, *Member,* has been the Sanitary Engineer of the State of Delaware since 1924. Prior to that time he was Assistant Engineer with the Pennsylvania and West Virginia Departments of Health. He is a member of the Council of State Governments' National Committee on Postwar Reconstruction and Development, and also of numerous other public administration agencies.



HON. JOHN M. CONWAY, *Member,* was elected to the Delaware State Legislature from the City of Wilmington in 1941. Before his election, Mr. Conway had been a member of the Wilmington City Council for the period between 1935 and 1939. He also has served as a member of the Board of Health of the City of Wilmington and has given freely of his time to many other public services.



HON. BURTON S. HEAL, *Member,* has occupied a large number of important legislative and administrative positions in city, county and state government. At present Recorder of Deeds of New Castle County, Mr. Heal during his career of public service, has been a member of both legislative branches of the State, of the County Levy Court, and of the City Council of Wilmington.



MR. HERBERT B. MEARNS, *Member,* is Treasurer of the Delaware State Commission for the Blind and is also President of the Board of Water Commissioners of the City of Wilmington, now serving his second six-year term with this agency. A banker by profession, Mr. Mearns in private life is Vice President and Treasurer of the Wilmington Trust Company.

Incodel's Committee on Quantity

To Incodel's Advisory Committee on Quantity of Water belongs the credit for the formulation of the technical conditions for the sharing of the waters of the Delaware River Basin which are incorporated in the Water Supply Diversion Legislation passed this year by the states of New York and Pennsylvania and now awaiting the approval of the New Jersey Legislature. Composed of the engineer from each of these three states who is most familiar with water supply and stream flow and regulation problems, the membership of the Committee represents over a century of practical experience in the administration of water problems.



Mr. Charles E. Ryder, a graduate of Lehigh University in 1905, is Chief Engineer of the Water and Power Resources Board of the Pennsylvania Department of Forests and Waters. He has been with this Board since 1907.

Mr. Russell Suter, a graduate of Massachusetts Institute of Technology in 1900, is Executive Engineer of the Water Power and Control Commission of the State of New York, with which agency he has been since 1910.

Mr. Howard T. Critchlow is Engineer in Charge of the New Jersey State Water Policy Commission. He has been with this Commission since 1917, and is a graduate of Cornell University, class of 1910.

Incodel's Committee on Quality

To Incodel's Advisory Committee on Quality of Water was assigned the task of establishing the basic standards for the treatment of sewage, industrial wastes and other polluting matter which have been adopted by the Delaware Basin states for the correction and control of stream pollution in the Delaware River and its tributaries. Like its companion committee on quantity, the Quality Committee also is composed of the state engineer of each of the Delaware Basin states who is most expert in his chosen field. Each of the members of the Committee has a record of many years of practical experience.



Mr. Howard E. Moses, a graduate of Dickinson College in 1898, is Chief Engineer of the Pennsylvania Department of Health. He has been with the Department for more than thirty-five years.

Mr. Harry P. Croft is the Chief Engineer of the New Jersey Department of Health. He has been with this agency since graduating from Lehigh University in 1913.

Mr. Charles A. Holmquist, with the New York State Department of Health since 1909, is Chief Engineer of its Division of Sanitation. He graduated from Massachusetts Institute of Technology in 1906.

Mr. R. C. Beckett (not pictured above), a member of both the Commission and the Quality Committee, is a graduate of Penn State, class of 1920.

Incodel's Committee on Planning

Incodel's Committee on Planning consists of the Chairmen and Directors of the State Planning Boards in the Delaware Basin states. In addition to specific assignments dealing with programs for the conservation and protection of the natural recreational resources of the Basin, the efforts and energies of this Committee have been concentrated upon the development of policies for the coordination of all of the various programs which have been undertaken by the Commission.

Included on this Committee are Commission members Dr. Charles P. Messick, Dr. M. P. Catherwood and Mr. F. A. Pitkin. Associated on the Committee with the Commission members are Mr. Russell Van Nest Black, Consultant to the New Jersey State Planning Board; and Mr. Morton L. Wallerstein of the National Resources Planning Board.

Incodel's Committee on Information and Research

Incodel's Committee on Information and Research was organized to cover another major field of the Commission's activities. Among other tasks, this Committee has developed a program to establish the Commission's offices as a clearing house of information and research on the basin and its problems.

Composed of representatives from leading educational institutions and technicians from federal and state agencies, its membership includes:

MR. R. D. FORBES, *Consulting Forester*
DR. W. BROOKE GRAVES, *Temple University*
DR. FRANK A. HEACOCK, *Princeton University*
DR. FRANK B. HOWE, *Cornell University*
DR. WILLIAM S. PARDOE, *University of Pennsylvania*
DR. WILLEM RUDOLFS, *N. J. Agricultural Experiment Station*
DEAN THORNDIKE SAVILLE, *New York University*

Incodel's Committee on Postwar Programs

Incodel's Committee on Postwar Programs was organized recently to formulate and recommend to the Commission a program of specific and practical projects for development within the Basin region during the period of transition between the end of the war and the beginning of operations under the world-wide program yet to be formulated for global peace and harmony. This committee consists of Commission members Dr. M. P. Catherwood, Mr. F. A. Pitkin, and Hon. Ellwood J. Turner; also Mr. Russell Van Nest Black of the New Jersey State Planning Board and Mr. Morton L. Wallerstein of the National Resources Planning Board.

Chronology of Meetings, 1942-1943

Incodel Business Meetings

The Interstate Commission on the Delaware River Basin held the following six business meetings during the 1942-1943 fiscal year. Each of these was attended by the majority of its Commissioners, and in several instances by representatives of its advisory committees and of its parent organizations, the Council of State Governments and the Interstate Cooperation Commissions in the area.

July 24-25, 1942	Annual Business Meeting and Conference at Shawnee-on-Delaware, Pennsylvania
October 6, 1942	New York City, New York
December 15, 1942	New York City, New York
January 23, 1943	Philadelphia, Pennsylvania
April 10, 1943	New York City, New York
June 4, 1943	Philadelphia, Pennsylvania

Incodel Conferences

The Commission also sponsored or participated in the following meetings and conferences. It will be noted that the Commission's business meetings were timed to take place in conjunction with most of these conferences.

July 23, 1942—Bethlehem, Pennsylvania.

Conference on stream pollution and water supply diversion programs with representatives of business, industrial and public agencies in the Lehigh River Valley.

October 6, 1942—New York City, New York.

Conference with members and administrative officials of the New York City Board of Water Supply.

December 15, 1942—New York City, New York.

Conference with members and administrative officials of the New York City Board of Water Supply.

January 13, 1943—Harrisburg, Pennsylvania.

Conference of the Pennsylvania members of the Commission with the Pennsylvania Water and Power Resources Board.

January 24-26, 1943—Baltimore, Maryland.

Sixth Biennial General Assembly of the Council of State Governments.

April 9, 1943—New York City, New York.

Regional Conference of the Council of State Governments on Post-war Planning.

Numerous meetings of the several Incodel Advisory Committees also were held during the year.



Chronology of Meetings, 1942-1943

Other Meetings and Conferences

As further evidence of the wide-scale activities of the Commission, Incodel members or staff representatives also participated in the following programs, among others:

Four-state conference of the American Water Works Association in Philadelphia, October 7-8, 1942.

Annual meeting of the Atlantic Deeper Waterways Association in Philadelphia, October 22-23, 1942.

Annual Meeting of American Society of Civil Engineers, New York City, January 20, 1943.

Seminar of School on Local and State Government, University of Pennsylvania, Philadelphia, Pa., February 4, 1943.

Annual Meeting of The Friends of the Land, Philadelphia, February 25, 1943.

Conference on City Planning for Philadelphia, March 3, 1943.

Hearings of United States House of Representatives Committee on Rivers and Harbors in Washington, D. C., March 9-10, 1943, on the New Jersey Canal Bill.

Annual Meeting of New Jersey Sewage Works Association, Trenton, New Jersey, March 26, 1943.

Conference with representatives of New Jersey and Pennsylvania water supply agencies in regard to New Jersey Ship Canal project, Philadelphia, Pennsylvania, April 3, 1943.

Conference with representatives of water supply agencies in the Philadelphia five-county metropolitan area in regard to water supply conservation campaign, Philadelphia, May 10, 1943.

Conference with legislative leaders and representatives of New Jersey water resources groups in Trenton, New Jersey, May 11, 1943, in regard to water supply diversion legislation.

Conference with representatives of water supply and public utility agencies regarding Incodel's multiple purpose reservoir investigation, Philadelphia, May 14, 1943.

Conference of American Society of Planning Officials, New York City, May 17-19, 1943.

Conference with members of the New Jersey State Water Policy Commission, East Orange, New Jersey, June 7, 1943.

Annual meetings of the Pennsylvania Water Works Association and the Pennsylvania Sewage Works Association in Harrisburg, Pennsylvania, June 8-9, 1943.

Programs and Policies

The work of Incodel is concerned with problems of interest to many departments and agencies of the participating states and of the federal government, and also to private business and industrial organizations. In view of this general situation, one approach to its broad objective of developing programs for the conservation of the natural resources of the Delaware River Basin might have been to embark upon a survey of the basin for all purposes on the theory that a comprehensive over-all plan is a prerequisite to the satisfactory solution of major problems regardless of their importance and urgency. This would have involved the spending of large appropriations and, no doubt, would have been spectacular.

Instead of such a blanket survey, Incodel adopted the policy of making a direct attack on obvious, important and urgent problems of interstate or regional significance.

Regarding this approach, Mr. Carl A. Bock, nationally recognized consulting engineer, who was engaged for a short period by Incodel to appraise its organization, procedures and programs, stated:

> "My review of the work of Incodel indicates excellent progress in the development of regional plans and policies. It has adopted a comprehensive plan for pollution control; it has effectively substituted arbitration methods for litigation in water controversies; it is successfully promoting the formulation of guiding principles, regulations and procedures for water supply diversion projects; it has functioned as a clearing house for information, and as a coordinator in fact-finding activities; it has compiled and published valuable factual data important to the solution of planning problems of the basin. . . .
>
> "I am convinced that Incodel has made a wise and very effective approach to its problems."

BUDGET

In the years before the war, Incodel operated upon an annual budget of $30,000 made up of equitably proportioned appropriations from each

of the four participating states. Within a few months after Pearl Harbor the Commission agreed to curtail its normal activities in order to make the services of part of its staff immediately available for full-time application to undertakings more essential for the successful prosecution of the war. In accordance with this policy it voluntarily reduced its budget by one-third. Concurrently the Commission transferred its emphasis, as far as possible, to efforts having a direct bearing on the war and on war production problems.

STAFF

Prior to our entrance into the war, the central staff consisted of a personnel of seven. However, as the result of the war and the consequent policy of curtailment adopted by the Commission, this now has been reduced to four.

In January of this year, Incodel agreed to relinquish the services of its Executive Secretary, David W. Robinson, for the duration of the war to the Council of State Government in order that he might carry out assignments involving the formulation of war and postwar measures for state government administration.

Earlier, in May 1942, the Commission released its two draftsmen so that they also might take advantage of the opportunity to become engaged in more vital war time activities.

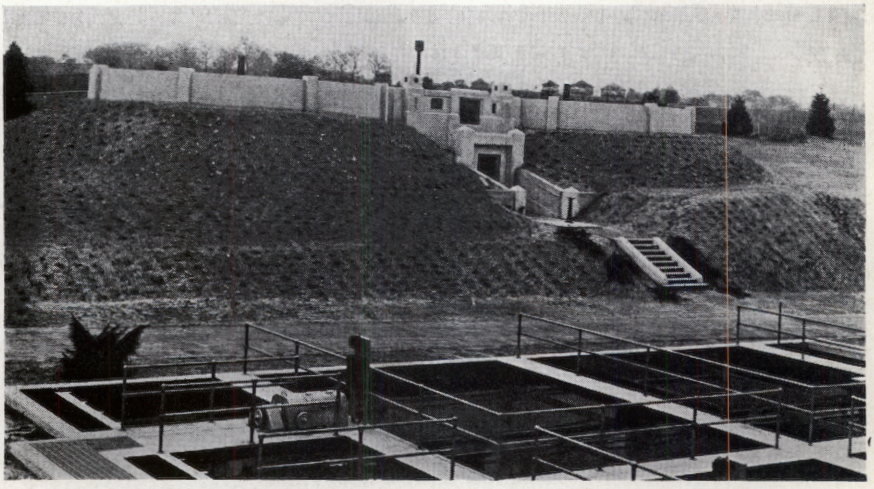
The present staff of four now is headed by James H. Allen, the Commission's Chief Engineer. His assistant is Henry A. Rowan. In addition, the office employs two stenographers.

FUTURE PROGRAMS

Now that there are indications that the United Nations are gaining control of the war situation, the Commission has concluded that its policy should be to devote a major and greater portion of its attention and energies in the future in preparing for the period of transition and the era of constructive rehabilitation between the end of the war and the beginning of the peace. As a result, among other projects, the Commission has begun to develop a public works construction program for the Basin, particularly in the field of stream pollution control and related water resources conservation.



An outfall sewer discharging raw sewage and wastes into the Delaware River.



A modern plant in which raw sewage and wastes are rendered inoffensive before final disposal.

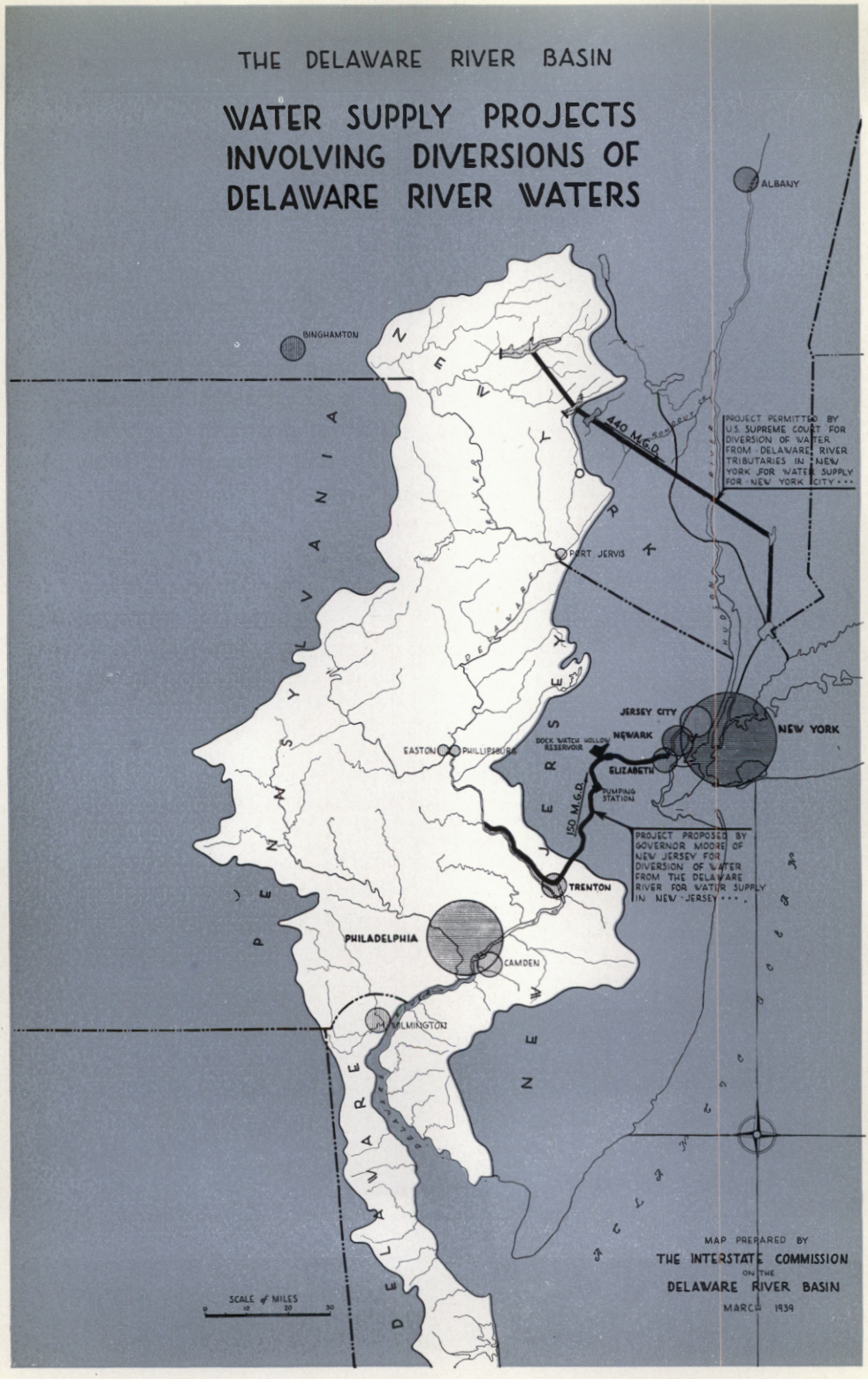
Stream Pollution

Incodel's announced first objective was to develop a policy and program for the control of stream pollution in the Delaware River Basin. This task was assigned to the Commission's Advisory Committee on Quality of Water. Resulting from its investigations, an agreement was reached in 1938 under which the River with its contributory drainage areas was divided into four zones. For each of these zones appropriate minimum standards were adopted for the treatment of sewage and industrial wastes and for the maintenance of the quality of the water in the receiving stream. The zones and the standards of quality were immediately approved by the four states' departments of health. They since have been used by these agencies as their guiding policy in dealing with stream pollution problems in the Delaware Basin.

The Incodel standards were subsequently made a part of a concurrent Act which has been officially ratified by the Legislatures and approved by the Governors of the States of Delaware, New Jersey and New York. The measure now is pending in Pennsylvania. Its ratification in this state will mark the attainment of another "first" for the Delaware Basin states in the progress of this nation's constant march to A More Perfect Union.

Prior to the outbreak of the war, Incodel's Planned Program for Pollution Control had resulted in the expenditure of more than $10,000,000 for the construction of necessary sewage collection and treatment works. Additionally, Philadelphia was ready to embark upon the construction of a $42,000,000 sewage collection and treatment program. The Cities of Camden and Gloucester across the river from Philadelphia also were under orders from the New Jersey Department of Health to cease the discharge of untreated sewage into the river. These cities have recently sought to prevent the Department from acting under the Incodel legislation claiming that a compact was necessary to effectuate an agreement between the states. A discussion regarding the validity of this claim is included in Appendix A.

Because of the more urgent need for materials and manpower to fight and win the war, these programs had to be set aside for the duration. Unquestionably they will be among the first public works projects to be undertaken in the postwar reconstruction period.


THE DELAWARE RIVER BASIN
WATER SUPPLY PROJECTS INVOLVING DIVERSIONS OF DELAWARE RIVER WATERS
ALBANY
BINGHAMTON
NEW YORK
PENNSYLVANIA
NEW JERSEY
DELAWARE
440 M.G.D.
PROJECT PERMITTED BY U.S. SUPREME COURT FOR DIVERSION OF WATER FROM DELAWARE RIVER TRIBUTARIES IN NEW YORK FOR WATER SUPPLY FOR NEW YORK CITY...
PORT JERVIS
JERSEY CITY
NEWARK
NEW YORK
DOCK WATCH HOLLOW RESERVOIR
ELIZABETH
PUMPING STATION
EASTON
PHILLIPSBURG
150 M.G.D.
PROJECT PROPOSED BY GOVERNOR MOORE OF NEW JERSEY FOR DIVERSION OF WATER FROM THE DELAWARE RIVER FOR WATER SUPPLY IN NEW JERSEY...
TRENTON
PHILADELPHIA
CAMDEN
WILMINGTON
SCALE of MILES
0 10 20 30
MAP PREPARED BY
THE INTERSTATE COMMISSION
ON THE
DELAWARE RIVER BASIN
MARCH 1939

Water Supply

A major part of Incodel's resources has been devoted to one of the most troublesome and difficult problems of the basin – water supply diversion.

For more than twenty years this problem was subjected to independent study by a variety of official agencies in all three states. But lacking effective interstate machinery, it was never solved. As a result, in 1929, litigation arose over the right of the City of New York to divert 600 million gallons of water from the tributaries of the Delaware River in New York State. New Jersey, seeking to prevent the proposed diversion, filed a Bill of Complaint in the United States Supreme Court; Pennsylvania intervened to establish and protect her rights.

After more than two years of legal controversy, costing the states about a million dollars, the Court established the principle of equitable distribution of the waters of the Delaware based upon reasonable needs. While it stated that the waters could be utilized under reasonable restrictions by and for the benefit of all the bordering states, it did not, and obviously could not, determine the manner in which the water could be utilized so as to be mutually beneficial and satisfactory to the interested states.

The formulation of the conditions for the realization of this objective has been the subject of an investigation of Incodel's Advisory Committee on Water Supply. After more than three years of careful, cooperative study, this Committee recommended a series of formulae under which, any state—through its subdivisions—may take the water it needs for water supply purposes, whether it be diverted from the tributaries of the Delaware River or directly from the channel of the river, or whether it constitutes a complete or a partial diversion.

These conditions were incorporated into concurrent legislative bills which were introduced in the 1943 sessions of the New Jersey, New York, and Pennsylvania legislatures. The measure has been passed in the last two states and awaits the approval of the New Jersey legislature which is now in recess.

A copy of the bill together with other explanatory and supplemental material is contained in Appendix B.

Recreation



Most of the 6,800 square miles embraced within that portion of the Delaware River Basin above Trenton Falls is a land of fertile farms, forested hills, picturesque streams and scenic beauty; a land which now serves, and which with careful planning may be made to serve much better, as a haven for the sportsman and a restful retreat for the vacationer; a land of limitless recreational possibilities.

Although lying within two hours' driving distance of 15,000,000 people, the area thus far has escaped much of the type of exploitation usually encountered in other areas of similar natural attraction. To protect and conserve the valuable resources of this region the Commission, through its Advisory Committee on Planning, has taken every opportunity to impress upon local and state authorities the necessity of planning and so guiding the physical development of the Upper Basin as to secure to it the full benefit of the advantages with which it has been endowed.

To this end the Commission has suggested an effective and economically valuable program which is set forth in full in its publication, "The Upper Valley: Planned Development or Exploitation".

The five major points of this program, under each of which are included detailed recommendations for their attainment, are:

I. Proper maintenance of the quality of the waters of the Delaware River and its tributaries.

II. Proper protection of the recreational values of the Delaware River.

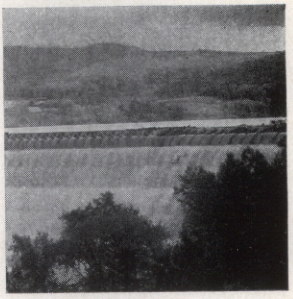
III. Improvement and proper protection of highway and transportation facilities.

IV. Establishment of official planning and zoning agencies in the region.

V. Promotion of official and general public interest in, and knowledge of, the value of the natural recreational assets of the Basin.

The Commission strongly feels that the execution of the above program is essential. Local initiative should continue to forward this activity.

Multiple Purpose Reservoirs



A congressional report published in 1932 setting forth the results of a survey of the Delaware River made by the United States Engineer Office suggests that the river could be developed advantageously for the combined production of hydro-electric power and water supply, and for such incidental uses as flood control, navigation, and stream flow regulation. The Engineers stated that federal participation in such a project, however, did not appear justifiable. They recommended that any development of the Delaware River, above Trenton, should be controlled by an interstate agency representing the interested states. While the policy for joint control of the Delaware River by the states as suggested by the Army Engineers is logical, it does not necessarily represent the view of the present or future national administrations.

With the view of knowing the facts in order to be prepared to intelligently appraise possible future suggestions for the establishment of a federal authority in the Delaware watershed, as was done in the Tennessee Valley, Incodel has completed an exhaustive investigation of the situation in this basin.

Its major findings include the following:

1. The "highest use" of the waters of the Delaware watershed is for public water supply. This use has precedence over all others.

2. The development of the Delaware for hydro-electric power *alone,* either under private or public control, would not be economically attractive.

3. While power developments *might* be combined advantageously, under public control, with a joint water supply project for Philadelphia and northeastern New Jersey, there appears to be no need nor reason for such a joint water supply in the near future, and the probability of its ultimate development is questionable.

Salinity in the Delaware



The area which adjoins the Delaware River between Philadelphia and the Pennsylvania-Delaware boundary line is one of the most important industrial sections in the entire United States. It depends almost entirely upon the Delaware River as its source of water supply.

Usually, the water of the river in this zone is excellently suited for industrial use. But during periods of drought, because of the reduced volume of fresh water flow, ocean water through tidal action progressively pushes itself up the river from the lower bay, changing the source from an acceptable quality into a brackish mixture unfit for normal uses.

This movement of salinity results in increased costs for water treatment and in other damages to industrial production which have been estimated to amount to a yearly average of more than $400,000. This is obviously a condition which should be corrected as far as practicably possible.

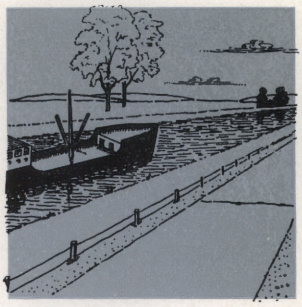
Several methods have been suggested for the alleviation of this situation, all of which have been investigated by Incodel.

An early proposal advanced the theory that when water supply reservoirs are built they should be required to be of such a size as to contain an amount of water sufficient to release into the stream to make up the deficiency caused by a drought. This has been found to be physically and economically impossible.

At one time, the suggested proposal of the Army Engineers for the construction of a series of reservoirs in the Delaware River (See Section on Multiple Purpose Reservoirs) was viewed by a few as a possible solution of the salinity problem. However, it has been ascertained that until such a project would be advisable for other uses it would be entirely impractical for this purpose. Its cost, at least $20,000,000, would be prohibitive.

In cooperation with the industries in the affected area it has been found that a practical solution lies in the construction of one or more reservoirs on tributaries conveniently located to the industrial centers from which water can be drawn during periods of salinity to supplant the deteriorated supply in the Delaware which normally would have to be used and processed at a great expense. Such reservoirs could be built for a fraction of the cost of the earlier alternatives and would be economically self-liquidating.

The New Jersey Canal



At the present time a bill is before the Congress of the United States to authorize the construction of a ship canal, costing $199,000,000, across the State of New Jersey from Bordentown, just below Trenton, on the Delaware River, to Sayreville on Raritan Bay.

Incodel has investigated this project carefully, having prepared and issued a report on the subject in October, 1942. While the results of this survey indicate that a canal across New Jersey might not be economically justified, the Commission's interest is not primarily concerned with this factor.

Incodel is interested principally in the probable effect of the operation of the canal upon the quality of the water in the Delaware River. Below Trenton, approximately 2,500,000 persons, in Bristol, Burlington, Philadelphia and Chester, get their municipal water supply from the Delaware. Hundreds of important industries also depend entirely upon the river for their source of water. If the canal were constructed as now proposed at least 150,000,000 gallons of water a day, and probably a much greater quantity, would be diverted from the river during periods of summer drought for its operation. No provision has been made to get this water from a stored supply. Consequently its taking during periods of summer drought would have a serious damaging effect. The reduction of stream flow would increase the pollution load in the river, aggravate salinity conditions in the lower estuary, and generally cause an appreciable deterioration of the quality of the water in the river for municipal and industrial uses.

Also, the claim that locks at each end of the canal can be so constructed and operated as to prevent the admission of any intolerable amount of salt water into the Delaware River from Raritan Bay is questionable. As far as is known no method yet devised has operated successfully in this respect for a canal of the size and type under consideration.

In view of the above circumstances, and because the canal cannot be built for use during the present war, Incodel takes the position that, as now proposed, the project should not be authorized. At best, its construction must be deferred until after the war. Before then and before authorization, opportunity should be afforded the states and regions affected to suggest revisions to overcome the undesirable features of the present proposal.

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Water Conservation



Early in May of 1942, Incodel was asked to undertake the planning and management of a Water Conservation Campaign in the Philadelphia Metropolitan District.

The war needs of the five-county area which include the District were increasing at such an alarming rate that unless "water-as-usual" habits were curtailed a serious breakdown seemed inevitable. It was obvious, however, that the situation did not rest in the hands of the management of the several water supply agencies serving the District but rather upon the degree of cooperation on the part of the 2,500,000 users of water to the pleas, "Don't Be A Drip!" and "Use Water Wisely."

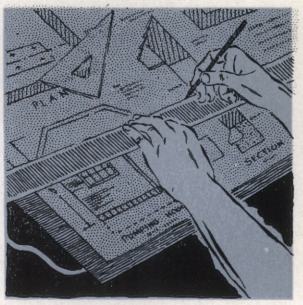
To reach the people a concentrated campaign covering a period of three consecutive weeks was conducted through the press, radio, schools, civic organizations and other agencies. Every effort was made to bring home the facts, seriousness and urgency of the threatened water shortage to the people. The voluntary cooperation of each citizen was requested. But the invitation to take part in the program involved no threats, no coercion, no compulsion.

The Mayor of Philadelphia opened the program with a radio address which he keynoted by stating "Here and abroad, on land and on sea, at present as in the past, Water Wins Wars!"

The five County Councils of Civilian Defense in the area cooperated wholeheartedly. Through them and other cooperating agencies 750,000 four-page leaflets outlining the facts of the campaign were personally distributed to every home in the District.

The patriotic response of the citizens to the request to conserve water for war and essential civilian needs and services was most encouraging. Through them, the District not only met the increased demands brought on by the war but did it with 20,000,000 gallons of water per day less than was used the previous year. This indicates that waste and non-essential water usage which normally comprise about 20 per cent of the entire demands for water had been almost completely eliminated.

Postwar Preparedness



At the moment no task is more vital than winning the war. But next in importance is the necessity of being prepared for the period of reconstruction that is to follow. The states of the Delaware River Basin have clearly recognized the mandate for postwar preparedness and are now engaged on many fronts in this campaign.

Incodel has an important part to play in the work. In particular it has the responsibility of assisting the states in the development and execution of coordinated postwar programs of public works construction in the Delaware River Basin, particularly in the field of stream pollution control and water resources use and conservation.

To be prepared for the resumption of the program for the construction of needed sewage and industrial waste treatment facilities, which had to be suspended during the war, will be of first importance. In magnitude this item of public works will comprise a shelf of projects totaling approximately $100,000,000 in value. The coal silt problem in the Schuylkill River subbasin also must be corrected. As to this problem the Commission is in a position to render impartial and valuable service in coordinating the conflicting interests and efforts of the various federal, state, municipal and private agencies which must attempt to blueprint the physical and financial arrangements for its solution.

Proposals for broad scale river regulation and control projects in the Delaware Basin by which the real or fancied needs for municipal and industrial water supply, flood control, navigation, salinity control, recreation, water power, and other related or incidental uses may be supplied, must be anticipated and analyzed. Their construction, if found advisable, should be planned for and negotiated by the Commission in order that the interests of the Delaware River Basin states may be properly protected.

The pattern of the Incodel organization makes it an ideal agency to provide the necessary liaison services whereby the independent programs of the Basin's governmental subdivisions, the states, and the federal government may be coordinated and carried out in a wise and efficient manner.

As STATED *in an earlier section of this report, Incodel's first objective was to devise a policy and program for the correction and control of pollution in the interstate Delaware River. The participating states, through the Commission, decided this could be done most effectively by attacking the pollution problem within their respective jurisdictions concurrently, and on the basis of standards to which they mutually agreed. To effectuate this policy, they adopted reciprocal legislation, the terms of which are printed in full in an Incodel publication, "Water Pollution," published in November, 1938.*

In the administration of its part in the stream pollution program, the State Department of Health of New Jersey issued orders to the Cities of Camden and Gloucester to cease polluting the Delaware River. The two municipalities, early in 1943, sought to contest the authority of such department to act under the reciprocal legislation, claiming it to be unconstitutional because it did not carry the consent and approval of the Congress of the United States.

The Commission entered this case, amicus curiae, *and through its solicitor, Duane E. Minard, of Hobart, Minard and Cooper, Newark, N. J., filed a brief in which the right of states to enact and operate under reciprocal legislative agreements is covered comprehensively. Because of the broad, and very often confused, thinking on this subject, that part of the brief which pertains to the matter is printed in full on the following pages:*

APPENDIX A

Stream Pollution

BRIEF AMICUS CURIAE

As presented in behalf of the Interstate Commission on the Delaware River Basin in the Bill for Injunction between the Department of Health of the State of New Jersey, Complainant and the Cities of Gloucester and Camden, Defendants.

STATEMENT

The Interstate Commission on The Delaware River Basin (hereinafter called "Incodel"), on whose behalf this brief is respectfully submitted, is a voluntary association formed, and maintained, by the states whose territories (in part) comprise the Delaware River watershed, in the manner, and for the purposes, recited in the Preamble of Chapter 146, of the laws of 1939 (pp. 477-479).

A brief summary of the historical background of Incodel will aid in the consideration of its interest, and part, in the abatement of pollution in the Delaware River.

Pursuant to Joint Resolution 14 (N.J.P.L. 1929, p. 823) what is known as the "Delaware Diversion Case" was instituted as an original suit in equity by complaint filed May 1, 1929, in the Supreme Court of the United States by the State of New Jersey to enjoin the State of New York and the City of New York (in which the Commonwealth of Pennsylvania intervened on the side of the defendants) from undertaking the proposed immediate diversion of 600, and the ultimate diversion of 2400, million gallons per day from the upper tributaries of the Delaware River located within the State of New York.

The complaint alleged injuries to the use of the river in New Jersey for water power, navigation, sanitation, industries, oyster culture, fisheries, water supply, agriculture and recreation. In the preparation and presentation of that case exhaustive research was made, and extensive and complete data was compiled and presented in evidence, on each of these subjects with relation to the Delaware River and its water-

shed. They were all evaluated and decided in the Master's report, which was confirmed by the court (New Jersey v. New York, et als., 283 U.S. 341).

Because the fruits of that research and the material accumulated in that record were too valuable to be disregarded or lost, all of the states interested, and the State of Delaware, decided to utilize them as a basis for the future conservation, development and protection of the vast resources of that river.

To that end they established, and have since maintained, Incodel, as a cooperative agency, in the manner and for the purposes described in the Preamble of Chapter 146, laws of 1939. A program has been formulated to develop cooperative action, and uniform laws, in the several constituent states to conserve, develop and protect the various uses of the river involved in the "Delaware Diversion Case."

Naturally, the first, and necessarily basic, project was the control of pollution, and the act in question was the result of that effort. A similar cooperative project, in the form of uniform laws, is now before the legislature of New Jersey, and the other states for the rationing and utilization of the river waters for public water supply. The plan is to promote similar cooperation, and uniform laws, covering other river uses according to their relative importance, but the control of pollution is the primary, and basic, necessity for the utilization of all other resources of the river.

The sanitary code in question is implemented with a nationwide pollution abatement plan of the various interested agencies of the federal government. In the second report of the Water Pollution Committee of the National Resources Committee, presented before the Committee on Rivers and Harbors of the House of Representatives, April 7, 1937 (Appendiae to report of hearings on H.R. 2711, H.R. 2300 and H.R. 3419), the recommendations included (pp. 8-9) the following:

> "(2) prepare comprehensive programs, covering the various drainage basins of the United States, designed to eliminate or reduce pollution and to improve conditions affecting the various interests concerned; and (3) encourage uniform and simplified State pollution-control legislation. Such drainage-basin programs should be reconciled with plans conserving water and promoting its use as needed for public-water supplies; propagation, conservation and use of fish, waterfowl, and other aquatic life; for recreational purposes; agriculture and other uses."

Reference is therein made (p. 9) to discussions held and tentative organization formed for the Delaware watershed.

On February 15, 1939, the President transmitted to the Congress of the United States a report on Water Pollution in the United States, prepared at his request by a special advisory committee of the National Resources Committee composed of experts from the Departments of War, Treasury, Interior, Agriculture and Commerce, and from private and state agencies (House Document No. 155, 76 Cong., 1st Session).

The following extracts are taken from that report:

(p. 57.)

> "No single standard is applicable generally, but it is practicable and desirable to set standards for selected portions of drainage basins with due regard for the natural conditions of the water for its present and potential use."
>
> "First, interstate organizations have agreed upon standards for water zones in two large areas having severe pollution problems—the New York-New Jersey coastal waters and the Delaware Basin;"
>
> "Practical application of this principle has been made during the past year by the Interstate Commission on the Delaware River Basin. It divided the basin into four zones as follows:"

Here follows (pp. 59-60) descriptions of the zones specified in Article II of the code (P.L. 1939, pp. 481-483), and reference to, and a statement of the reasons for, the several standards of quality prescribed for each zone (P.L. 1939, pp. 483-487).

(p. 72) **"C. Need for Interstate Compacts and Agreements.**

> Inasmuch as many heavily polluted streams flow through more than one state, enforcement by states individually may prove ineffective. The chief interstate drainage areas which have serious pollution problems are the . . . Delaware, . . . However, in the remaining areas where pollution is serious, the interstate compact or agreement offers a possible remedy to the ills resulting from inconsistent and non-uniform state laws."

(p. 73) . . . "an informal agreement on standards of water quality has been adopted by the Interstate Commission on the Delaware River Basin."

(p. 76) **"Delaware Basin Reciprocal Agreement.**

Rapid strides toward pollution abatement in an interstate area have been taken in the Delaware Basin under the leadership of the Interstate Commission on the Delaware River Basin. This group is composed of legislative members of Delaware, New Jersey, New York and Pennsylvania, appointed under provisions of State legislation establishing commissions on interstate cooperation. As a part of its program for the development of the Delaware Basin, 'Incodel' has brought about agreement on standards of quality as described in section (Article) III (P.L. 1939, pp. 481-483) and on a schedule of needed construction.

"The commission and the responsible administrative agencies in the four states have ratified a classification of the waters of the basin along lines which are described in section III. It is the commission's opinion that further or additional pollution of the waters of the river is definitely prevented by the terms of the reciprocal agreement."

In the Delaware Diversion case the City of New York was allowed to divert a maximum of 440,000,000 gallons a day from the tributaries of the Delaware river in that state, but only on two conditions:

(a) Treatment of water by New York City to provide a specified maximum of animal and chemical pollution of the water at the New York-New Jersey state line.

(b) Maintenance of an established minimum flow at Port Jervis and Trenton by means of additional reservoir capacity to avoid unsanitary effects of the diminished flow. (New Jersey v. New York, 283 U.S. 341, 346-7.)

Those conditions were imposed to prevent the river between Pennsylvania and New Jersey from suffering increased pollution resulting from the diversion of water from its tributaries and to enable those states to preserve a suitable sanitary condition for water supply, recreation, industry, agriculture, fishing, oysters, and other beneficial uses.

They were adopted by the court on the recommendation of the Master, who said in his report (pp. 126-7):

> "After the waters of the Delaware River leave New York State, it is then the problem of Pennsylvania and New Jersey to see to it that the waters of the river are not unduly polluted from sources on the New Jersey side and the Pennsylvania side. All three states have laws relative to preserving the sanitary condition of their waters . . . (referring to existing sanitary code agreements between the Health Departments of Pennsylvania, New Jersey and New York) for preserving the Delaware River in a sanitary condition. . . . The agreements provide for a high degree of treatment of sewage before it is discharged into the Delaware River above Easton, Pennsylvania, and Phillipsburg, New Jersey, and provide for a sedimentation of sewage before it is discharged into the river below said points. . . . Mr. Stevenson (Chief Engineer of the Pennsylvania Department of Health) testified that these agreements had been fruitful of good results.
>
> ". . . I find that there is an effort on the part of all three states to require the treatment of sewage and industrial wastes so as to preserve the sanitary condition of the Delaware River, and these efforts are progressive and may be expected still further to reduce pollution of the stream, but there remains much yet to be done in that regard."

The sanitary code, embodied in Chapter 146 (laws of 1939) to establish standards of quality of water, is the result of further cooperative efforts of the states mentioned, and of the National Resources Committee and Public Health Service of the federal government (p. 479). A definite, uniform public policy for the prevention of pollution, and the protection and preservation of potable water supplies is declared in the act.

This is one of many acts of concurrent legislation enacted pursuant to mutual agreements between states prescribing reciprocal and uniform regulations of sanitation or other matters within their territorial limits, respectively, in bodies, or streams, of water lying between or adjacent to the constituent states. The object is to avoid conflicts between the laws and regulations of such states which might, and often do, interfere with the health and welfare of their respective citizens.

This case involves an act of the legislature of New Jersey, adopted in the furtherance of the cooperation of the constituent states respecting the Delaware River watershed, in which New Jersey, as well as the other states involved, has a common interest in the objects above mentioned (p. 477).

Such cooperative enterprises are so obviously beneficial to the public interest that public policy requires their encouragement, and they should not be stricken down unless a state (in this instance New Jersey) attempts to exercise a jurisdiction that would be unlawful if exercised within its own territorial limits if the cooperative feature was not involved.

This brief discusses certain defenses raised by the defendants, respectively, in which they challenge the constitutionality of Chapter 146, P.L. 1939. The other defenses presented in the answers will be considered in a brief to be filed by the Attorney-General.

ARGUMENT

I.

Statutes Are Presumed Constitutional

The burden of showing that a statute is unconstitutional is upon the person alleging that it violates the constitution.

State Board v. Newark Milk Co., 118 N.J.E. 504, 519 (E. & A. 1935).

> "A legislative enactment should not be set aside unless its constitutionality indisputably appears. If there be a permissible doubt as to the existence of the constitutional limitation invoked against the validity of an act, the courts will not declare the act to be contrary to the constitution.
>
> Attorney-General v. McGuinness, 78 N.J. Law 346."

II.

First Defense Filed by Both Defendants

The First Defense filed by both the defendants alleges that Chapter 146, P.L. 1939, is unconstitutional and void, because it is an agreement or compact entered into by one state with another state without the consent of Congress in violation of Article I, Section 10, of the Constitution of the United States.

The applicable provisions of the U. S. Constitution are:

> "No state shall enter into any Treaty, Alliance, or Confedera-

tion," and "No state shall, without the Consent of Congress . . . enter into any agreement or compact with another state." (Article I, Section 10)

Since only the interests of the United States can be adversely affected by a compact between states, it lies not in the mouth of these defendants, as creatures of the state which has sanctioned this agreement by legislative action, to make such an objection. As appears from the recitals in the Statement at the beginning of this brief, and the fourth recital in the Preamble of the act (P.L. 1939, p. 479), this agreement was made pursuant to recommendation of, and in cooperation with, the responsible agencies of the federal government. If there is any question about the lack of Congressional approval only the federal government can (and it does not) make such objection. Congress has given its blanket approval of such agreements:

> "Consent of the Congress of the United States is given to each of the several States of the Union to enter into any agreement or compact, not in conflict, with any law of the United States, with any other State or States for the purpose of conserving the forests and the water supply of the States entering into such agreement or compact." (Title 16, Sec. 552, USCA. p. 373). Mar. 1, 1911.

Congressional consent in advance of an agreement is equally valid with one given afterwards, Virginia v. Tennessee, 148 U. S. 501, 521, 59 Corpus Juris, sec. 13, p. 38. Three other instances have been noted in the federal statutes of Acts of Congress giving advance blanket authority for interstate agreements or compacts relating to various other subjects.

We think the foregoing consent of Congress is amply clear and comprehensive, but if it is urged that it is too narrow, or of doubtful application to this reciprocal code, there is ample authority to show that this is not a "Treaty, Alliance, Confederation," or an "Agreement or Compact," requiring congressional approval.

This is not a matter involving a joint enterprise, like the Port of New York Authority, or the Delaware River Joint Commission, where a joint administrative, or governmental, agency is set up to operate an interstate facility. Here, each state deals reciprocally, but separately through its established agencies, with a problem clearly within its jurisdiction, and solely within its own territorial limits.

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Although the National Resources Committee and the Public Health Service of the federal government participated in the deliberations on this code (P.L. 1939, p. 479), its promulgation and enforcement involves no question of federal jurisdiction and is not inconsistent with any federal law. The purification of navigable inland waters is as beneficial to navigation, water power, or any other federal interest, as it is to other uses of the waters of the river, and federal governmental approval is unnecessary unless an obstruction to navigation occurs.

The question of what state compacts or agreements must be approved by Congress was considered by the United States Supreme Court in State of Virginia v. State of Tennessee, 148 U.S. 501, 518 (37 L. ed. 537, 542) where the court upheld a compact fixing the boundary line. We quote (p. 542-3 in 37 L. ed.):

> "There are many matters upon which different states may agree that can in no respect concern the United States. . . . If the bordering line of two states should cross some malarious and disease producing district, there could be no possible reason, on any conceivable public grounds, to obtain the consent of Congress for the bordering states to agree to unite in draining the district, and thus remove the cause of the disease."

The Court held that compacts or agreements which do not affect the political influence of either state or the federal government are not within the prohibition.

In Wharton v. Wise, 153 U.S. 155, the court dealt with a compact between Virginia and Maryland to regulate oyster fishing in boundary waters. It quoted and followed the decision in Virginia v. Tennessee and held that such a compact did not require approval of Congress for the reasons stated in the Virginia-Tennessee case.

The Wharton decision (pp. 370-3) states that:

> "Various compacts were entered into between Pennsylvania and New Jersey and between Pennsylvania and Virginia, . . . in reference to boundaries between them, and the rights of fishery in their waters, and to titles to land in their respective states, without the consent of Congress, which indicated that such consent was not deemed essential to their validity."

The compacts between Pennsylvania and New Jersey above referred to are found in Revised Statutes sections 52:28-23 to 52:28-32, and were

adopted as the present one was, without Congressional approval. They have been in force, and respected, throughout the entire history of the State of New Jersey.

When those compacts were made Article VI of the Articles of Confederation, provided as follows:

> "No State without the consent of the United States shall . . . enter into any agreement, alliance or treaty with any . . . state; . . . No two or more States shall enter into any treaty confederation or alliance whatever between them, without the consent of the United States in Congress assembled." (Title Constitution, N. J. Code Annotated, P. 19.)

In Dixie Wholesale Grocery, Inc. v. Marlin, 278 Ky. 705 (Cert. denied, 308 U.S. 609; 84 L. ed. 509), the court held that section 10 applied only to political compacts, alliances and treaties. Under the agreement in that case one state agreed to supply another state with certain sales figures to aid in enforcing sales taxes. The court held that a mere reading of this section (10) shows conclusively that it has no application to the reciprocal agreement under attack.

In McHenry County v. Brady, 163 N.W. 540 (N.D. 1917) there was an agreement to drain a certain river. The court said that the prohibition applies only to a treaty of alliance or some joint scheme of commercial or industrial enterprise, and does not apply when one state wishes to agree with an adjoining state to erect a levee in the latter state. Other illustrations of state agreements which do not require congressional consent are given. The prohibition applies only to such an agreement or compact as is in its nature political, and does not apply to the drainage agreement in question.

The rule is stated in 59 Corpus Juris, p. 37, as follows:

> "This provision does not apply to every possible agreement or compact between two states, but only to such as might tend to alter the political power of the states affected, and thus encroach on, or interfere with, the supremacy of the United States; agreements incapable of operating thus may be made by the states without the consent of congress."

On either basis of the above argument, it is clear that this defense is frivolous, or sham, according to the view taken, and invalid on its merits, and should be stricken out.

THERE is printed in full in Appendix B of this report the terms of the reciprocal legislation which has been formulated by the Interstate Commission on the Delaware River Basin in which are set forth the conditions under which the waters of the Delaware River Basin may be diverted for public water supply purposes. This Act was passed by the Legislatures and signed by the Governors of the States of New York and Pennsylvania during the 1943 legislative sessions.

The Act as printed in this Appendix is in the form in which it was approved in Pennsylvania. The New York Act is substantially similar. The legislation now awaits approval in New Jersey where the Legislature is in recess until fall.

In the immediately following pages, and preceding the terms of the Act itself, there is presented a summarized statement of explanation as to the purposes, terms and effect of this reciprocal legislation.

APPENDIX B
Water Supply Diversion

Explanatory Statement
Incodel Water Supply Diversion Bill

The purpose of this legislation is to establish a coordinated and unified policy in the States of New Jersey, New York and Pennsylvania in regard to the future development and operation of water supply projects which involve the diversion of the waters of the Delaware River. The provisions of the legislation will become effective after ratification by the three states.

BACKGROUND

The Problem

The diversion of water from the Delaware drainage basin has been a controversial subject of long standing. Attention was first directed to the matter in the early 1920's. At that time, New York City was beginning to outgrow its sources of water supply in the Hudson River Basin. With a view to the future it concluded that the best potential source for its next supply lay in the Delaware River Basin in that state. At about the same time New Jersey also decided that a part of its future supply would be obtained from the Delaware Basin. Pennsylvania, too, was looking to the upper Delaware watershed as the logical source for a mountain supply for Philadelphia.

Tri-State Compact Commissions

At this period the impression prevailed in each of these states that the so-called "common law doctrine of riparian rights" applied. This meant that a diversion affecting another state could only be made with the consent of that state. However, because of the interest on the part of all three states in their prospective water supply projects, attempts were made in 1925 and 1927 to negotiate a compact for the division of the waters of the Delaware Basin among them.

These efforts were unsuccessful. The problem was viewed in a competitive spirit, each state standing independently and rigidly upon its own theories in the matter.

The United States Supreme Court Case

The controversy reached a climax in 1929 when New York City decided to proceed with a project to develop an additional source of water supply from the tributaries of the upper Delaware Basin. New Jersey immediately started proceedings in the United States Supreme Court to stop it. Pennsylvania intervened to protect its interests. After two years of litigation backed by a formidable array of legal and technical experts whose services cost the states a million dollars, the Court gave its decision. It denied the New Jersey injunction, but limited the diversion to New York to 440,000,000 gallons daily instead of 600,000,000 gallons planned for, and set up certain rules regarding the manner in which the project should be operated.

Being restricted by constitutional limitations to consideration of actual projects and controversies, the Court declined to announce the conditions under which Pennsylvania and New Jersey could obtain future supplies from the Delaware basin for the use of its municipal subdivisions. However, even if it had authority to do this, of necessity, its decision would have been based upon the maze of conflicting evidence offered by the combatant experts. A conclusion reached in this fashion never is satisfactory.

NEW APPROACH—INTERSTATE COOPERATION

Still being of utmost importance, but unsettled, the Interstate Commission at the time of its creation in 1936 decided that the solution of the water supply diversion problem should be one of its first objectives. Being founded on the principle of cooperation, its approach, in contrast to previous efforts, was to have the interested states tackle the problem jointly, not independently.

Technical Advisory Committee

The task was assigned to a technical advisory committee upon which each state was represented by the engineer of that state most familiar with water supply and stream flow and regulation problems. Mr. Howard T. Critchlow, Engineer in Charge, State Water Policy Commission,

was the New Jersey member. His associates were Mr. Charles E. Ryder, Chief Engineer of the Water and Power Resources Board of the Pennsylvania Department of Forests and Waters, and Mr. Russell Suter, Executive Engineer, Water Power and Control Commission of the State of New York. After four years of painstaking study these three state engineers reached an agreement as to the conditions under which, in their opinion, future water supply diversion projects should be operated. The results of that agreement are incorporated in the Act which is printed on the following pages of this Appendix.

EXPLANATION OF BILL

Briefly stated, in substance, the bill consists of three major subdivisions:

1. Declaration of Legislative Intent.
2. Conditions Governing Diversion Projects.
3. Provisions for Administration.

Declaration of Legislative Intent

The intent and purpose of the bill is to stipulate conditions which have been determined to be mutually advantageous under which the waters of the Delaware River and its tributaries may be *diverted* to meet prospective needs for public water supply purposes.

The bill defines diversion to be the complete removal of water into an area entirely outside of the Delaware watershed, or a removal under which the water would by-pass the stream from which it is taken for a substantial distance. The bill does not apply to projects in which a diversion is not involved. Nor does it apply to any of the other innumerable uses to which the water of the basin could be put, such as water power and navigation.

Conditions Governing Diversions

The conditions governing diversions, stated as simply as possible, comprise a strengthening and amplification of the basic principle underlying the decree of the United States Supreme Court, previously mentioned. This Court has ruled that the waters of the Delaware River Basin may be utilized for water supply purposes for the benefit of all

owner states, but that projects for such use must be operated in a manner which will be beneficial, not harmful, to the lower interests. In the bill, this principle has been expanded to make it applicable to any diversion in any of the states. More important, the proposed conditions will accomplish this fundamental objective better than under the rules established by the Supreme Court. In each instance, the requirements are such as to permit water to be taken from the flow of the streams *only* when such flow is relatively high. In times of drought it will be necessary to release water, previously captured during flood conditions, into the stream upon which the project is located. But under the proposed bill two-thirds more will be required to be released as compensating water, in times of extreme drought, from a project in the uppper part of the basin than is required under the Court rule. This will be more beneficial to the lower interests in New Jersey and Pennsylvania. The additional releases will be helpful and valuable in the control of stream pollution. They also will reduce to some extent the periodic occurrence of ocean borne salt water in the section of the river between Marcus Hook and Philadelphia.

No specific conditions are included in the bill for a partial diversion from the main channel of the river. While such an undertaking would be recognized as a partial diversion, the conditions under which it may be made have been left for future determination and negotiation among the states. This has been necessary because, in contrast to a complete diversion, no single equitable standard could be adopted for this type of diversion project.

Administration

The third major subdivision of the bill pertains to administration. No new state agency, or interstate agency, is created for this purpose. In each state this function is delegated to that state agency now having jurisdiction over water control policies.

In the case of a diversion project in any state the applicant, as at present, is required to obtain the approval of the water control agency of that state. In addition to its present policies, such agency would examine the proposal to determine whether it complies with the conditions of the three-state agreement. Finding that it does, the state agency then is required to notify the corresponding agencies in the other two states. They, in turn, are required to examine the proposal, and to report their approval, if there are no objections, to the petitioning state

agency within six months. Having unanimous agreement among the three states, they then, on this basis, would apply concurrently to the Supreme Court for its formal approval of the project in those cases in which the Court has jurisdiction.

SUMMARY

The act will not in any way affect or impair any existing rights in the subject matter. Its primary purpose is to establish the guiding principles under which the inherent right of each of the states to utilize the waters of the Delaware River Basin for public water supply may be enjoyed and protected. The conditions governing diversions represent the unanimous opinion of the most qualified water resources engineer of each of the three interested states. The acceptance of these principles by the states should eliminate future controversies in regard to water supply diversions. Thus unnecessary and expensive litigation will be avoided. Moreover, proving that the participating state governments are equipped and willing to resolve their own problems in this field harmoniously, it will go a long way in precluding the necessity for Federal intervention in the interstate water problems of the Delaware River Basin.

Incodel Water Supply Diversion Bill

as drafted and negotiated by Incodel and presented herein in the form in which it was enacted by the Commonwealth of Pennsylvania

AN ACT

To promote interstate cooperation for the use, conservation, protection and equitable diversion of the water resources in the Delaware River Basin between and among the States of Pennsylvania, New York and New Jersey for the purpose of meeting prospective needs for domestic and municipal water supply, regulating and limiting the use of the waters of the Delaware River and its tributaries and prescribing rules and standards, requiring permits from and providing for hearings by the Water and Power Resources Board and for appeals from its decision, vesting power in the Water and Power Resources Board to vary or modify the rules and standards under certain conditions and to adopt rules and regulations and further defining its powers and duties, requiring notice to the States of New York and New Jersey of all applications for water diversion, providing for the filing of stipulations by the Attorney General with the United States Supreme Court and obtaining its approval of water diversions.

Whereas, the States of New York, New Jersey, Pennsylvania and Delaware have each created and now maintain a Commission or Committee on Interstate Cooperation for the purpose of establishing and maintaining governmental machinery to facilitate communication, negotiation, understanding and cooperation between said states respectively and other states of the Union, both regionally and nationally, with power to establish such committees, sub-committees and advisory boards as are deemed advisable to conduct conferences and to formulate proposals concerning subjects of intergovernmental cooperation in the common cause of reducing the burdens which are imposed upon the citizens of every state by governmental confusion, competition and conflict and

Whereas, said Commissions or Committees on Interstate Cooperation of said states have organized and established and are now maintaining as an instrument of governmental machinery a joint advisory board known as "The Interstate Commission on the Delaware River Basin" as a regional commission composed of standing sub-committees of said Commissions or Committees on Interstate Cooperation respectively for

the purpose of entering upon a program to study among other subjects the water supply and the conservation and protection of the water resources of the Delaware River Basin and

Whereas, the Commissions or Committees on Interstate Cooperation among the said states favor the enactment of uniform laws and the adoption of uniform rules to regulate the use and diversion of the waters of the Delaware River and its tributaries for the purpose of meeting present and prospective needs for domestic and municipal water supply purposes in said states respectively and

Whereas, the said Commission on the Delaware River Basin through its Technical Advisory Committee on Quantity of Water, consisting of representatives of the Water and Power Resources Board of the Department of Forests and Waters of the Commonwealth of Pennsylvania and of similar agencies of New Jersey and New York, has made a study for the purposes above recited of the said Delaware River and its tributaries in said Delaware River Basin and

Whereas, the said Commission on the Delaware River Basin has formulated and approved proposals for interstate cooperation in the use, conservation, protection and equitable diversion of the water resources of the Delaware River Basin

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

Section 1. Legislative Intent. It is hereby declared to be the intent and purpose of this act to regulate the diversion and use of the waters of the Delaware River and its tributaries for the purpose of meeting present and prospective needs for domestic and municipal water supply and the provisions of this act shall apply to the Commonwealth or any agency thereof, any municipality or civil division of the Commonwealth, any district or similar agency or authority, persons, partnerships, corporations or associations.

Section 2. Definitions. The following words, phrases or abbreviations, unless the context clearly indicates otherwise, shall have the meanings ascribed to them in this section.

"Board" means the Water Power and Resources Board of the Department of Forests and Waters of the Commonwealth of Pennsylvania or its duly constituted successor.

"Person" includes the Commonwealth or any agency thereof, any municipality or civil division of the Commonwealth, any district or

similar agency or authority, persons, partnerships, corporations or associations.

"c.f.s." is the abbreviation for cubic feet per second.

"c.s.m." is the abbreviation for cubic feet per second per square mile of contributing drainage area.

"Delaware River" means that reach of the Delaware River which extends from the confluence of the West Branch and the East Branch of the Delaware River near Hancock, New York, to the point where it passes the boundary line between the States of Delaware and Pennsylvania.

"Delaware River Basin" means the total area drained by the Delaware River and its tributaries.

"Waters of the Delaware River" or "Waters of the Delaware River Basin" means the surface waters originating within the Delaware River Basin.

"Channel" or "Channel of the Delaware River" means the bed of the Delaware River and the lands on and over which the waters of said river flow.

"Upper Basin" means that part of the Delaware River Basin from which the surface waters flow and enter the channel of the Delaware River at and above its confluence with the Neversink River. The Upper Basin shall be understood to include the area drained by the Neversink River.

"Lower Basin" means that part of the Delaware River Basin which is not embraced within the Upper Basin.

"Tributary" or "Tributary of the Delaware River" means any watercourse the waters of which naturally flow into the channel of the Delaware River.

"Complete Diversion" means the taking or removal of waters of the Delaware River Basin to a point outside of the Delaware River Basin.

"Partial Diversion" means the taking or removal of waters from any point in the Delaware River above Trenton Falls or from any tributary of the section of the Delaware River above Trenton Falls which water is returned to the channel of the Delaware River under the following conditions:

A. If taken from a tributary such water is returned but not in such a manner as to be available in the channel at the confluence of such tributary and the Delaware River.

B. If taken from the Delaware River such water is returned but not above a point twelve miles below the point of taking as measured along the center line of the channel, provided that if the water is returned within twelve miles of the point of the original taking said taking shall not be considered a partial diversion.

"Divert" means to effect a complete diversion or a partial diversion.

"Development" means the construction of any works for the taking of water or the storage of water for diversion.

"Develop" means to make available by development.

"Point of Development" means the place on the Delaware River or upon a tributary at which the lowermost structure, dam, intake or other works is maintained for the purpose of making water available for diversion.

"Domestic and Municipal Water Supply" means the use of water by or for water works serving the public.

"Natural Flow" means the rate of flow of a river, stream or tributary as it would occur if it were not affected materially by artificial works or developments.

"Actual Flow of the Delaware River" means the existing flow of the Delaware River uncorrected for the effects of any developments or works of man excepting for the effect of any by-passing of the flow of the stream around the point of development.

"Control Rates" means certain rates of natural flow of a stream at the point of development used in fixing the rate of flow to be maintained below the point. Such rates are correlated with certain rates of natural flow at the stream gaging station cooperatively operated by the United States Geological Survey at Trenton, New Jersey, and they are to be obtained as follows: From the record of flow of the Delaware River at Trenton gage for the years between October 1, 1928, and September 30, 1941, both inclusive, corrected for diversion around that station and for artificial regulation, using for this purpose the corrections reported by the United States Geological Survey, it has been determined that the natural daily flows of the river at that point exceed 4,000 c.f.s. for seventy-six (76) per cent of the time, exceed 3,400 c.f.s. for eighty-two (82) per cent of the time, and exceed 2,500 c.f.s. for ninety (90) per cent of the time. From the measured or computed rates of natural flow of the stream under consideration at the proposed point of development and for the years between October 1, 1928, and September 30, 1941, both inclusive, rates of flow are determined which will be exceeded by

the natural flow for the same percentages of time, seventy-six (76) per cent, eighty-two (82) per cent and ninety (90) per cent as have been determined for Trenton gage as shown. These rates of flow are termed the 4,000 c.f.s., 3,400 c.f.s. and 2,500 c.f.s. control rates for that point of development. In arriving at the rates of natural flow of the stream as above set forth, measured rates of flow shall be used as far as they may be available. Otherwise the rates shall be derived from the records of the nearest and most suitable gaging stations, using accepted hydrological methods for making the computations.

"Mean-annual-yield" means the average daily rate of natural runoff of the stream under consideration at its point of development for the period between October 1, 1928, and September 30, 1941, both inclusive. In determining the mean-annual-yield as above set forth measured rates of flow shall be used as far as they may be available. Otherwise such yield shall be derived from the records of the nearest most suitable gaging stations, using accepted hydrological methods for making the computations.

"Diversion Project" means any project for development or use of the waters of the Delaware River for domestic and municipal water supply involving a complete diversion of water from the channel of the Delaware River or a complete diversion of water from a tributary of the Delaware River or a partial diversion of water from a tributary of the Delaware River, all as set forth in this act.

Section 3. General Provisions for Diversions. It shall be unlawful to divert water under a Diversion Project without the previous consent and approval of the Water and Power Resources Board. Such consent and approval shall be given only if in addition to the determinations which the Board is required to make under any other statutory provision it shall also determine that such Diversion Project fully complies with the provisions of this act.

Section 4. Provisions for Complete Diversions from Tributaries of the Delaware River. Complete diversions of water from the tributaries of the Delaware River for domestic and municipal water supply purposes shall be subject to the following provisions:

A. Whenever the natural flow of the tributary under development at its point of development exceeds its 4,000 c.f.s. control rate no release of water from storage to maintain the flow of the tributary need be made as far as this act is concerned.

B. Whenever the natural flow of the tributary under development at its point of development falls below its 4,000 c.f.s. control rate the flow of the tributary immediately below the point of development shall be maintained as follows:

1. Whenever the natural flow of the tributary falls below its 2,500 c.f.s. control rate the rate of flow required to be maintained shall be fifty (50) per cent of the mean annual yield of the stream if in the Upper Basin and forty (40) per cent of the mean annual yield of the stream if in the Lower Basin.

2. Whenever the natural flow of the tributary is between its 2,500 c.f.s. control rate and its 4,000 c.f.s. control rate the rate of flow required to be maintained shall be twenty-five (25) per cent of the mean annual yield of the stream if in the Upper Basin and twenty (20) per cent of the mean annual yield of the stream if in the Lower Basin.

Section 5. Provisions for Partial Diversions from Tributaries of the Delaware River. Partial diversions of water from tributaries of the Delaware River for domestic and municipal water supply purposes shall be subject to the following provisions:

A. Whenever the natural flow of the tributary under development at its point of development exceeds its 3,400 c.f.s. control rate no release of water from storage to maintain the flow of the tributary need be made as far as this act is concerned.

B. Whenever the natural flow of the tributary under development at its point of development falls below its 3,400 c.f.s. control rate the flow of the tributary immediately below its point of development shall be maintained at a rate at least equal to said natural flow during the time it is below the 3,400 c.f.s. control rate.

Section 6. Provisions for Complete Diversions from the Channel of the Delaware River. Complete diversions of water from the channel of the Delaware River for domestic and municipal water supply purposes shall be subject to the following provisions:

A. Whenever the actual flow of the Delaware River at the point of development exceeds a rate of 0.59 c.s.m. equivalent to 4,000 c.f.s. at Trenton if in the Upper Basin or exceeds a rate of 0.50 c.s.m. equivalent to 3,400 c.f.s. at Trenton if in the Lower Basin, all or any part of such

actual flow in excess of the rates hereinabove specified may be withdrawn from the river and be diverted.

B. Whenever the actual flow of the Delaware River at the point of development falls below a rate of 0.59 c.s.m. if in the Upper Basin or falls below a rate of 0.50 c.s.m. if in the Lower Basin no part of such actual flow may be withdrawn from the river. In addition to this restriction during the time that the actual flow of the Delaware River is below the rates hereinabove specified water shall be released from storage and be delivered into the Delaware River in such a manner as to be available immediately below the point of development. The amount of water to be so released shall be determined by the following formula:

$$R = \frac{C}{S} - (YK) \text{ in which formula}$$

"R" represents the amount of water to be so released in cubic feet per second.

"C" represents the average daily amount of the proposed diversion in c.f.s.

"S" represents the safe yield which has been determined to be representative of tributary streams located in the various parts of the Delaware River Basin before providing for compensating releases. Values of "S" shall be as follows:

In the Upper Basin	1.8 c.s.m.
In the Lower Basin	
In Pennsylvania	1.6 c.s.m.
In New Jersey	1.2 c.s.m.

"Y" represents the mean-annual-yield of the stream upon which storage is provided for the purpose of making the prescribed release of water.

"K" represents 40 per cent whenever the aforesaid actual flow of the Delaware River at the point of development is less than 0.37 c.s.m. and twenty (20) per cent whenever the aforesaid actual flow is between 0.37 c.s.m. and 0.59 c.s.m. if in the Upper Basin or between 0.37 c.s.m. and 0.50 c.s.m. if in the Lower Basin.

Section 7. Provisions for Partial Diversions from the Channel of the Delaware River. The provisions of this act do not apply to partial

diversions from the channel of the Delaware River, but the Board shall nevertheless make determination of the fact that such proposed diversion is a partial diversion as herein defined.

Section 8. Provisions for Complete and Partial Diversions from the tributaries or the channel of the Delaware River. Whenever a project involving both complete and partial diversions from either the tributaries of the Delaware River or the channel of the Delaware River is undertaken the provisions for complete and partial diversions as herein prescribed shall apply to each kind of diversion and to the respective quantities involved in each of such diversions.

Section 9. Act to be Enforced by the Water and Power Resources Board. The Board is hereby designated as the agency of the Commonwealth to administer and enforce compliance with the provisions of this act and the rules and regulations adopted under its authority.

Section 10. Powers and Duties of the Board in Relation to the Delaware River Basin. The Board shall have power and authority to:

1. Adopt such rules and regulations for the efficient administration of this act as it shall find to be necessary.

2. Study, consider and determine upon a public policy with regard to the conservation and protection of the water resources of the Delaware River Basin and the equitable and reasonable diversion of water from the Delaware River and its tributaries.

3. Request the Interstate Commission on the Delaware River Basin to cooperate and assist the Board in such surveys and investigations of the water resources of the basin as the Board may undertake.

4. Request the Interstate Commission on the Delaware River Basin to investigate, report on and recommend the equipment necessary adequately to measure all quantities and rates of stream flow necessary for the proper enforcement of this act, to cooperate and assist the Board in the observation of the operation of all developments and to recommend procedures necessary to secure compliance with this act and its purposes, to report and to recommend to the Board whether the quantity of water proposed for diversion and use by a project in New York, New Jersey or Pennsylvania is fair and equitable, to report and to recommend to the Board the manner in which water may be diverted from the channel of the Delaware River and its tributaries and specific

rules and regulations based on the principle of equitable apportionment and reasonable diversion in compliance with this act.

5. Supply information and data on water diversions from the Delaware River or its tributaries to the State of New Jersey and the State of New York.

6. Continue as a commission or by representation to confer with the Interstate Commission on the Delaware River Basin and representatives of the State of New Jersey and the State of New York with regard to all of the above matters and the general problem of the regulation and diversion of the waters of the Delaware River Basin for water supply and municipal purposes.

Section 11. Procedure for Obtaining the Approval of the Board. The procedure for obtaining the consent and approval of the Board for any diversion project shall be that set forth in any present or future statute authorizing such diversions by any person as above defined and all applicable terms and provisions of all such statutory provisions shall remain in full force and effect in such cases, but in addition thereto before approving an application the Board must have made the additional determinations specified in section three. Upon receipt of an application for approval of a diversion project as above defined or before making decision with regard to such diversion project in a case wherein the Board adopts such project, the Board shall send written notice to the corresponding agency of the State of New York and the State of New Jersey outlining the proposed diversion project, stating when and where the hearing thereon will be held and requesting such agencies to submit to the Board a statement of its position in regard thereto. At the hearing on such project representatives of such state agencies of New York and New Jersey may appear and present oral and written testimony.

Section 12. Approval by the United States Supreme Court. Whenever acting under the provisions of this act the Board, after having duly considered the views of the other states, shall give its final approval to any diversion project, application shall forthwith be made to the Supreme Court of the United States for approval of such project. The decision and approval of the Board shall be of no force or effect unless and until the project has been approved by the Supreme Court of the United States in those cases in which the said Court retains or assumes jurisdiction in the matter.

Section 13. Diversion Projects in Other States. Whenever the Board shall receive written notice similar to that provided for in section eleven from either the State of New Jersey or the State of New York of an application for approval of a diversion project or the proposed adoption of such a project, in either or both of these states the Board shall study the matter, communicate and confer with the proper authorities of the other states, attend hearings and generally take all proper steps to protect the interests of this State. As promptly as possible and not later than six months after the receipt of such notice the Board shall submit a statement of its findings with regard thereto to the interested state or states. If the Board shall find that the project is fair and equitable to the Commonwealth of Pennsylvania and in accordance with the provisions of this act it shall prepare a statement to that effect and submit it to the Attorney General and the Governor for approval. On receipt of such approval the agencies of the other two states shall be so advised. Thereafter when application is made to the Supreme Court of the United States for approval of such project the Attorney General may by stipulation or otherwise consent to an entry of an order by that Court approving of such diversion.

Section 14. Enforcement. The Board shall have the power to bring such actions, suits or proceedings as in its judgment may be necessary or proper to enable the Board to perform any of the duties imposed on it by any of the provisions of this act or to prevent the violation by any person or corporation, public or private, of any of the provisions thereof.

Section 15. Existing Rights Preserved. The passage of this act shall not impair or affect any lawful rights existing at the time this act takes effect to make complete or partial diversions. Any person in this Commonwealth now legally diverting or having legal authority to divert water for domestic and municipal water supply from the Delaware River or its tributaries may apply to the Board for modification of the restrictions under which such diversion is made or is to be made. The Board may modify such restrictions subject to and in accordance with the provisions of this act to such extent as may be necessary or appropriate for the purpose of any diversion project hereunder. In acting on such cases the Board shall follow the procedure set forth in this act in so far as it may be made to apply.

Section 16. Constitutional Construction and Severability. The provisions of this act shall be severable and if any phrase, clause, sentence or provision of this act is declared unconstitutional or the applicability thereof to any person is held invalid the constitutionality of the remainder of this act and the applicability thereof to other persons and circumstances shall not be affected thereby. It is hereby declared as the legislative intent that the act be construed liberally.

Section 17. Repeals. All acts or parts of acts inconsistent with this act are hereby repealed.

Section 18. Adoption of Similar Acts by New Jersey and New York. On approval of the enactment of this act by the Governor, the Secretary of the Commonwealth shall certify copies thereof to the Secretaries of State of New Jersey and New York with a request that similar acts enacted by those states be certified to him. On receipt of certified copies of such acts he shall determine whether in his judgment said acts contain substantially the same provisions as to water supply diversion projects to be constructed in the Delaware River Basin as those herein contained. Should he so find with regard to enactments by both the State of New Jersey and State of New York he shall so certify to the Governor, the Water and Power Resources Board and the Secretaries of State of New Jersey and New York. The provisions of this act shall not be put into operation until the first day of January next succeeding such certification.

Section 19. Effective Date. The provisions of this act shall become effective immediately upon its final enactment.

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