

DELAWARE RIVER BASIN COMMISSION



*Annual Report* 1963





*Scene on Upper Delaware*

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*Cover: Looking south from the Delaware Water Gap.*



## *Introduction*

This First Annual Report of the Delaware River Basin Commission is presented to the people of the Basin and to the Congress of the United States and the Legislatures of the Commonwealth of Pennsylvania and the States of New York, Delaware and New Jersey. The United States Government and the States are the five signatory parties to the 1961 Delaware River Basin Compact, the authority under which the Commission was established.

The period actually covered by this report is from the first organization meeting of the Commission at Princeton, N.J., on December 13, 1961 through the fiscal year ending on June 30, 1963. The Commission's governing body, made up of the Governors of the signatory states and a Federal Commissioner appointed by the President of the United States, each with a voting Alternate Commissioner, was in existence throughout the period covered by this report. However, most of the 1961-1962 fiscal year had passed before the first staff employee of the Commission was engaged in the Spring of 1962.

The principal theme of this report is **BUILDING A SOUND FOUNDATION** for a long-range river system planning, development and management agency. In a phrase, this theme summarizes the dominant consideration of both the policy-guiding governing body and the professional staff of the Commission since its formation. Laying the foundation has involved a vast combination of administrative organizing, staffing, compiling knowledge about the Basin, early programming, and establishing cooperative relations with agencies of the signatory parties and with the great variety of persons and organizations outside the overnment structure that share the Commission's interests.



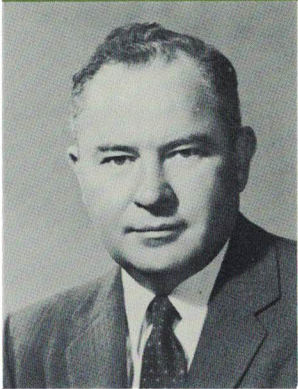
DELAWARE RIVER BASIN COMMISSION

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Richard J. Hughes†  
*Governor of New Jersey*

H. Mat Adams, *Alternate*

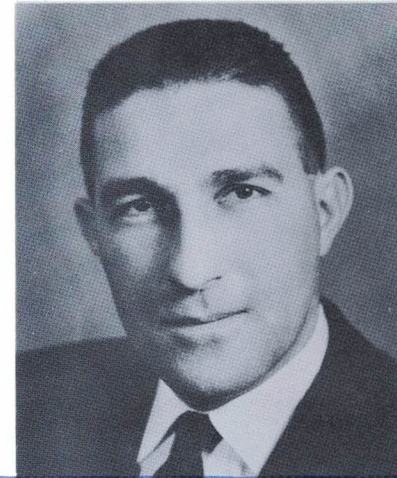


Vernon D. Northrop,  
*Alternate*

Col. Elmer P. Yates,  
*Advisor*



*Chairman*



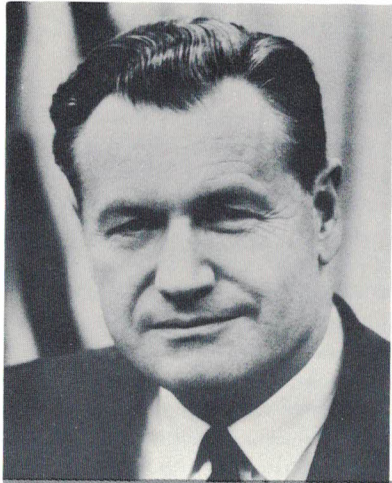
Stewart L. Udall\*  
*U.S. Secretary of Interior*



William W. Scranton†  
*Governor of Pennsylvania*



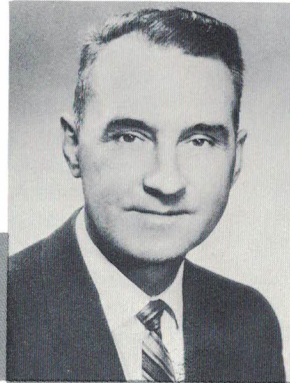
*The Commission · 1963*



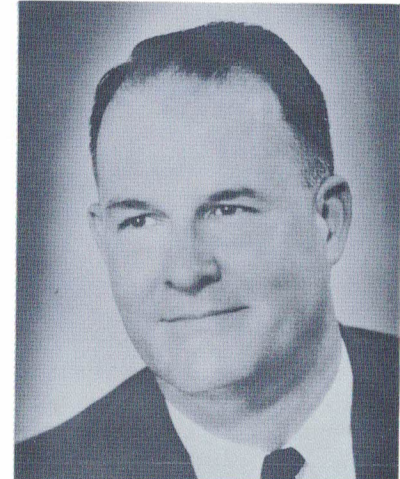
*Vice Chairman*

Nelson A. Rockefeller †  
*Governor of New York*

Harold G. Wilm, *Alternate*



Arthur C. Ford, *Advisor*



Elbert N. Carvel †  
*Governor of Delaware*

Norman M. Lack, *Alternate*



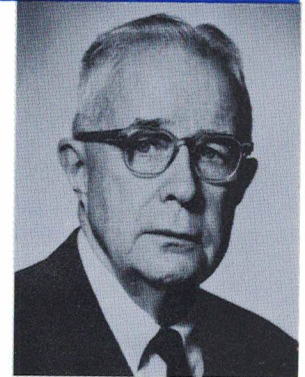
Maurice K. Goddard, *Alternate*



William L. Rafsky, *Advisor*



\* By appointment of The President  
† Ex officio







## *The Delaware Basin Compact*

The success story to establish a strong regional action agency representing the interests of every one who relies upon or is concerned with the resources of the great Delaware River system began in July 1955

It was in that month, only weeks before the Valley's worst flood disaster struck on the weekend of August 19, that the Chief Executives of the Commonwealth of Pennsylvania and states of New York, Delaware and New Jersey and the Cities of Philadelphia and New York agreed to unite in a drive to seek Basinwide solutions to the water resource problems of the Delaware Valley. This agreement resulted in the establishment of the Delaware River Basin Advisory Committee, with one member each appointed by Mayors Robert F. Wagner Jr. of New York and Joseph S. Clark of Philadelphia, now the senior U.S. Senator from Pennsylvania, and Governors Robert B. Meyner of New Jersey, George M. Leader of Pennsylvania, J. Caleb Boggs of Delaware and W. Averell Harriman of New York.

The Advisory Committee's original membership comprised Thomas Morgan for New York State, John P. Robin for Pennsylvania, James Kerney Jr. for New Jersey, General Norman M. Lack for Delaware, Major Irving Huie for New York City and Gilbert F. White for Philadelphia.

The first chairman was Mr. Morgan, followed by Mr. Kerney and later by Mr. Robin, who headed the Committee for the longest period and during the 1960-1961 compact negotiations. Walter M. Phillips was the Committee's Executive Secretary throughout its six-and-one-half-year period of existence. Subsequent Advisory Committee members were Arthur C. Ford for New York City; Thorndike Saville and State Conservation Commissioners Sharon Mauhs and Harold G. Wilm for New York State; State Conservation Commissioners Joseph E. McLean, Salvatore A. Bontempo and H. Mat Adams for New Jersey, and Senator Clark and William L. Rafsky for Philadelphia. Senator Clark was named to the Committee by Richardson Dilworth, his successor as Mayor of Philadelphia.

Establishment of the Advisory Committee meant that for the first time the many governmental jurisdictions within the four-state, 12,750 square-mile Basin area had agreed upon a unified approach to the comprehensive development and control of the river system.

Absence of a regional effort left the downstream jurisdictions and New York City, which draws about a third of its water supply from the Delaware headwaters, with no place but the U.S. Supreme Court to settle their water rights disputes. It meant runoff of vast quantities of precious water into the Atlantic Ocean in wet periods instead of storage for the supply-short dry spells that invariably follow. It meant severe hardships from flooding, an annual occurrence in many areas, rather than an enlightened Valleywide flood damage reduction program. It left millions of citizens without the advantage of widespread water-based recreation that could be made available.

In the wake of the flood devastation in August 1955 that took 99 lives and inflicted more than \$100 million in property damage came a public clamor reflected by the Congress' quick action in directing the Army Corps of Engineers, in cooperation with other Federal agencies, to fashion a comprehensive physical plan to develop and control the Delaware's resources.

It is a tribute to the foresight of the four Governors and two Mayors that their action in creating the Advisory Committee did not wait until disaster struck. Yet, without question, the fear of a recurrence of that tragedy played a major role in the progress of the Basin planning activities in the eight years that have followed.

While the Advisory Committee was busy concerning itself with the legislative and governmental aspects of the basin planning job ahead, the Corps of Engineers and 18 other Federal agencies were working on the study and report, at a cost of several million dollars, to solve the physical problems involved.

On July 10, 1958 the same Governors and Mayors convened at Washington Crossing, Pa., in the first of a series of "summit" meetings to hear a progress report on the activities of the Advisory Committee and the Corps' study.

By this time, another study, into the type of governmental organization that should be created as a permanent Basin agency, was well under way at the Maxwell Graduate School of Syracuse University. The Water Research Foundation of the Delaware River Basin, a non-government group which the Advisory Committee helped found, had contracted with Syracuse for the study after securing a \$131,000 Ford Foundation grant to finance



## *... why and how*

it. Mr. Kerney had become Executive Vice President of the Water Research Foundation, and the Syracuse study team had been organized under the direction of Dr. Roscoe C. Martin, Professor of Political Science.

Meanwhile, the efforts to alert prominent citizens, organizations and the general public to the needs of the Valley received a boost with the formation in May 1959 of the Water Resources Association of the Delaware River Basin, a non-profit and non-partisan citizen group dedicated to the Basin's orderly development. This group was later to become increasingly active as the "best friend and severest critic" of the Commission.

The second "summit" meeting was held in Philadelphia on September 30, 1959, at which the Chief Executives, now including Governors Nelson A. Rockefeller of New York and David L. Lawrence of Pennsylvania, received the Syracuse report, "River Basin Administration and the Delaware," and accepted a recommendation for a joint federal-state Commission to be created by compact between the states and Federal Government. After deciding on this recommendation, the Governors and Mayors directed the Advisory Committee to draft the necessary legislation.

The recommendation for the establishment of a Commission attracted immediate widespread attention, mainly due to the unique arrangement under which the Basin states and the Federal Government were for the first time in the Nation's history to join hands as essentially equal operating partners in a river planning and development agency.

In December 1960 the Corps completed its report. This dramatic document, 11 volumes in length, advocated a 50-year development program of 58 water control projects at a cost of \$591 million to reduce flood damage, to augment stream flows and increase water supplies, to provide 41,000 acres of additional recreation waters, and to produce millions of kilowatt hours annually in conventional hydroelectric power. The Corps assignment did not encompass such political and policy issues as what kind of government arrangement should be made to implement the plan and how its recommendations might be financed. These problems had been placed in the lap of the Advisory Committee.

Within three months after the Corps completed its findings, the Advisory Committee unveiled its compact draft at a third "summit" meeting, also in Philadelphia, on February 1, 1961. This meeting brought another new chief executive, Governor Elbert N. Carvel of Delaware, into the Basin's planning picture. The Compact draft was officially received and endorsed by the Governors and Mayors, and by nightfall had already been introduced in the legislature of one state, New York.



*On November 2, 1961, former Govs. Meyner, Carvel and Lawrence joined President Kennedy at the White House for a formal Compact signing ceremony.*

Each Commissioner is authorized by the Compact to name an advisor. Representatives of New York City and Philadelphia have been designated as Advisors to the Commissioners of their respective states in recognition of their deep interest in the Basin's resources and Commission's activities. The U.S. Commissioner designated a representative of the Corps of Engineers.

Before the summer months had passed, the Compact had won the approval of both houses of the legislative branches of all four states and the Congress and had been signed by the four Governors, each of whom had thrown full support behind the plan in his own state. It was record speed for a compact approval.

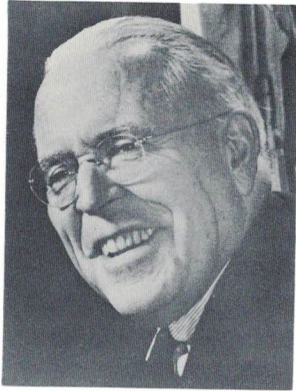
On September 27, 1961, President John F. Kennedy added his signature to the Congressional action. Thirty days later, on October 27, the Delaware Basin Compact was law. A White House Compact-signing ceremony, attended by representatives of all the five signatory parties, was held on November 2, 1961. \*

Less than six weeks later, on December 13, 1961, the historic first meeting of the Delaware River Basin Commission, fittingly ceremonial, was held in Princeton. Its mission achieved, the Advisory Committee was dissolved, although two of its staff members were later to move into key Commission positions -- William Miller as General Counsel and W. Brinton Whitall as Secretary.

\* *United States: Public Law 87-328, Approved September 27, 1961, 75 Statutes at Large 688.*  
*Delaware: 53 Delaware Laws, Chapter 71, Approved May 26, 1961.*  
*New Jersey: Laws of 1961, Chapter 13, Approved May 1, 1961.*  
*New York: Laws of 1961, Chapter 148, Approved March 17, 1961.*  
*Pennsylvania: Acts of 1961, Act No. 268, Approved July 7, 1961.*



## The Commission's Early Decisions



Former Gov. Lawrence



Former Gov. Meyner

Shortly before 11:00 o'clock on the morning of December 13, 1961 the original membership of the Delaware Basin Commission, seated in a large conference room off the lobby of Princeton's Nassau Inn, responded to its first roll call. The opening of this meeting between Governors Lawrence, Meyner and Rockefeller, Secretary of Interior Udall and a representative of Governor Carvel signaled a new era for conservation and water resource development in the heavily-populated and still fast-growing river valley. Governor Lawrence was elected as the Commission's first Chairman and Secretary Udall as Vice Chairman for the year 1962.

The event meant that for the first time the focus of all major water resource activities in the Basin by the Federal Government and the states would be located beneath the roof of a single authority. There was at last foreseeable a united and coordinated Valleywide assault on the problems involving flood control, water supply, anti-pollution, water-related recreation, fish and game propagation and protection, development of hydroelectric power and promotion of forestry, watershed and soil conservation programs.

The Commissioners immediately assigned their Alternate Commissioners to find a permanent executive director and provided for the interim operation of the Commission by the temporary staff appointments of three leading figures of the Compact negotiation period -- John P. Robin as Acting Executive Director, Walter M. Phillips as Acting Secretary and William Miller as Acting General Counsel.

The first organization meeting was the only Commission session held while Governor Meyner was in office. Upon turning his post over to Governor Richard J. Hughes a month later, he cited in his farewell mes-

sage the agency's creation as a "proud" achievement of his Administration.

The March 28, 1962 meeting of the Commission was also important. This session, Governor Hughes' first, resulted in the appointment of James F. Wright, then Chief Deputy Director of the California Water Resources Department, as Executive Director; the selection of Trenton, New Jersey's capital city, as the location of the Commission's permanent headquarters, and adoption of current expense budgets of \$80,000 for fiscal 1962 and \$33,000 for fiscal 1963.

Still another major result of the March meeting was the unanimous approval of the 20-point First Phase Comprehensive Plan, the preparation of which had been ordered by the Commissioners only three and one-half months earlier and which included the Tocks Island Reservoir on the main stem of the river just north of the Delaware Water Gap. The Tocks Island project is one of a dozen multi-purpose dam and reservoir proposals incorporated in the Commission's Comprehensive Plan as the result of recommendations by the Corps of Engineers' report of 1960. The remaining eight projects included in the Comprehensive Plan adopted at the March meeting are local watershed control efforts in Pennsylvania, New Jersey and Delaware in which local authorities have teamed with the U.S. Soil Conservation Service and, in most cases, the U.S. Forestry Service,

*Lt. Gen. W. K. Wilson Jr., Chief of Army Engineers, confers with five Delaware Basin Commissioners before their 1963 reorganization meeting at Wilmington.*





## *... charting the course*

under Public Law 566.

Four months hence, the Commission was to make its first addition to its Comprehensive Plan by adding to it a large number of pre-existing projects such as municipal water supply and waste disposal facilities, non-urban recreation areas, river stage and stream gauging stations and, on an interim basis, the water quality standards that had been produced in the early 1940s by the Interstate Commission on the Delaware River Basin (Incodel).

It was a month later that the Commission exercised for the first time its Compact power to pass upon projects initiated by non-Commission sources, public or private, to insure that they conform to the Commission's Comprehensive Plan. This Commission power was first employed in approving the application of the City of Philadelphia to build a new addition to its Northeast Sewage Treatment Works. The Compact provision involved was Section 3.8, known as the "project review" clause.

At the August 29, 1962 meeting the Commission took its first action on a matter involving hydroelectric power in the Basin. In another exercise of its project review function under the Compact, it granted an application by a group of New Jersey utility companies to construct a pumped-storage project using water from Yards Creek, a short distance over the Kittatinny Ridge from the projected location of the Tocks Island dam.

At the same meeting, the Commission issued a historic decision involving the first out-of-basin water diversion authorized by an administrative agency, breaking the pattern of such rulings emanating from judicial or legislative halls. Transfer of diversion disputes to an agency where settlements could be shaped by the affected parties themselves had been a goal of the Compact's framers. The decision permitted a water company to divert up to a billion gallons yearly during high flow periods from Bear Creek in the Delaware Basin to supply a new industrial area in the Susquehanna Basin.

In keeping with the Compact's concern for fish and game values in the Basin, the Commission, at a meeting in the Poconos attended by Governors Lawrence and Carvel, went on record in September 1962 urging the U.S. Fish and Wildlife Service to analyze and evaluate data collected in a Tri-State fisheries study launched in the Basin in 1959.

At the same session, the Commission also prepared for the fiscal needs of 1963-64 by adopting a \$530,000 budget.

The Commission's November 28, 1962 session was marked by an announcement that the States of Pennsylvania and Delaware, under Commission auspices, had come to an agreement that the Brandywine

Valley project would be developed by Pennsylvania in such a manner as to protect the downstream interests of the State of Delaware. The Brandywine project is one of the eight local watershed development programs in the Commission's Comprehensive Plan.

The 1963 reorganization was held February 27 at Wilmington and was the first Commission session ever attended by all four Governors and Secretary Udall, who was elevated to the Chairmanship to succeed Governor Lawrence. Governor Rockefeller became Vice Chairman. It was Governor Scranton's first Commission meeting. Despite the turnover in Commission membership from two states during the first 13 months of the Commission's existence, continuity in the operation of the new agency's day-to-day affairs throughout the period covered by this first report was assured by the retention of all five original Alternates.

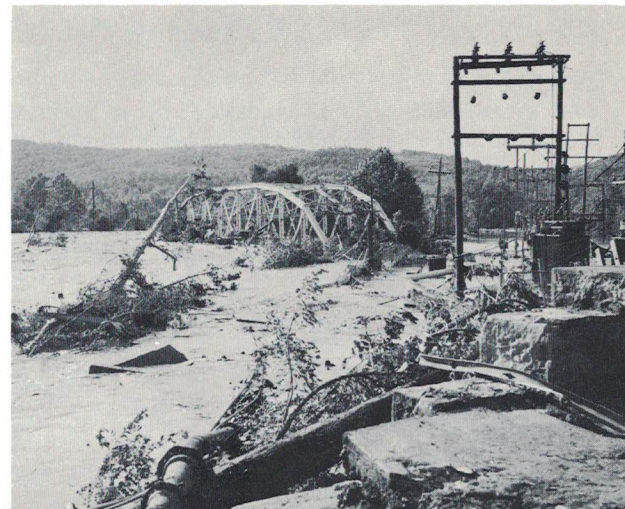
The new Chairman's address reviewed the growth and accomplishments of the Commission in relation to national needs and programs and stressed the important role that lay ahead for the Commission in helping to frame broad regional goals. The Executive Director reported on the progress in assembling his staff, and alerted the Commission to important policy considerations lying ahead in the fields of flood loss reduction, hydroelectric power, water quality improvement and the financing of water supply and recreation costs.

In April 1963 Colonel Truman H. Setliffe retired from the Corps of Engineers after nearly four years' service as Philadelphia District Engineer, during which he played an important role in the Basin planning efforts. He was succeeded both as District Engineer and as Advisor to the U.S. Commissioner by Colonel Elmer P. Yates, former Chief of the Atomic Division in the Army's Research and Development Office. Throughout the period covered by this report Arthur C. Ford was New York City's Advisor to the New York State Commissioner and William L. Rafsky of Philadelphia was Advisor to the Pennsylvania Commissioner.

Col. T. H. Setliffe







*Provoked by a one-two hurricane punch, the flood torrents of August 1955 found bridges from Trenton north a favorite target. A span across Brodhead Creek at Stroudsburg was ripped from its moorings (top right), while the swollen Delaware tore the old Phillipsburg-Easton free bridge in half (center). The Washington Crossing span north of Trenton managed to survive the record flows (bottom), although a long shutdown for repairs was required.*





## Highlights

Many of the significant events and decisions of the past 18 months that will affect future activities in the Delaware Basin occurred far beyond the doors of the Commission's headquarters at Trenton and outside the Commission meeting rooms. Some took place in the halls of Congress or in the legislatures of the other four signatory jurisdictions, while others occurred in government executive offices. Three decisions involved the President of the United States. Some important occurrences involved gatherings of private organizations.

Here is a chronology of events affecting the Valley during the past year-and-a-half:

**April 15, 1962**—The U. S. Public Health Service opens its offices in Philadelphia to begin a major water quality study of the Delaware River estuary in which the Commission is actively participating.

**June 21, 1962**—Representative Francis E. Walter of Pennsylvania, who died May 31, 1963, introduces the first bill in Congress calling for establishment of a vast National Recreation Area at the Tocks Island Reservoir. A companion proposal is introduced on July 11 in the Senate by U. S. Senators Joseph S. Clark and Hugh Scott of Pennsylvania, Clifford P. Case and Harrison A. Williams Jr. of New Jersey and Jacob K. Javits of New York.

**August 27, 1962**—The Corps of Engineers submits its request to Congress for authorization of eight major Delaware Basin dam projects in the Commission's Comprehensive Plan carrying a total cost figure of \$224 million and each with federal aid flood control features. These are projects one through eight in the Comprehensive Plan adopted by the Commission on March 28, 1962.

**October 4, 1962**—U. S. Senate and House Appropriations Committee conferees clear a Corps of Engineers' request for \$100,000 in advance engineering and design funds for the Beltzville Reservoir in the Lehigh Valley, but, at the same time, failed to approve a similar request of \$200,000 to begin work at Tocks Island.

**October 23, 1962**—President Kennedy signs into law the Congressional authorization of the eight Delaware Valley projects from the Commission's Comprehensive Plan.

**October 25, 1962**—An appropriation of \$100,000 for initial work on the Beltzville Dam project is approved by President Kennedy.

## ... away from home

**November 16, 1962**—The Corps of Engineers at Philadelphia announces the signing of contracts for an aerial survey and core drilling, pressure testing and test boring to determine the nature of sub-surface materials at the Beltzville Reservoir site.

**November 29, 1962**—Channel 13, New York City's educational television outlet, produces show on the Tocks Island Reservoir plan, featuring appearances by U. S. Senator Williams of New Jersey and officials of the Corps of Engineers, National Park Service and the Commission. Maintaining its interest in the Delaware Valley, Channel 13 broadcasts a program on "What the Commission's Comprehensive Plan Means to New Jersey" on April 24, 1963.

**January 1, 1963**—Incodel closes the doors of its Philadelphia offices after more than a quarter-century of operation under Executive Secretary James H. Allen, during which its principal activities were in the field of water quality. The staff and assets of Incodel are absorbed by the new Delaware Basin Commission.

**January 17, 1963**—In his annual Budget Message to the Congress, President Kennedy asks for a \$250,000 appropriation for design and engineering work on the now-authorized Tocks Island Dam and for \$240,000 in additional funds for the Beltzville project. (As of the publication of this report, these proposals were still before the Congress).

**January 21, 1963**—Representative Walter reintroduces his Tocks Island Recreation legislation, and his action is followed quickly by similar moves on the part of Representative John P. Saylor of Pennsylvania and five basin Senators, Messrs. Scott, Clark, Javits, Case and Harrison Williams.

**May 27-29, 1963**—National Watershed Congress for 1963 is held in Philadelphia with emphasis on the Delaware Basin Compact and other affairs in the Valley.

**June 25, 1963**—The Natural Resources and Power Subcommittee of the U. S. House Government Operations Committee, under the Chairmanship of Representative Robert E. Jones of Alabama, schedules an on-site public hearing and inspection tour in the Delaware Basin as part of its nationwide investigation of water pollution problems.

**June 30, 1963**—As the fiscal year ended, the Kennedy Administration prepares to unveil its official endorsement of the National Recreation Area plan for the Tocks Island Reservoir.







## The Comprehensive Plan

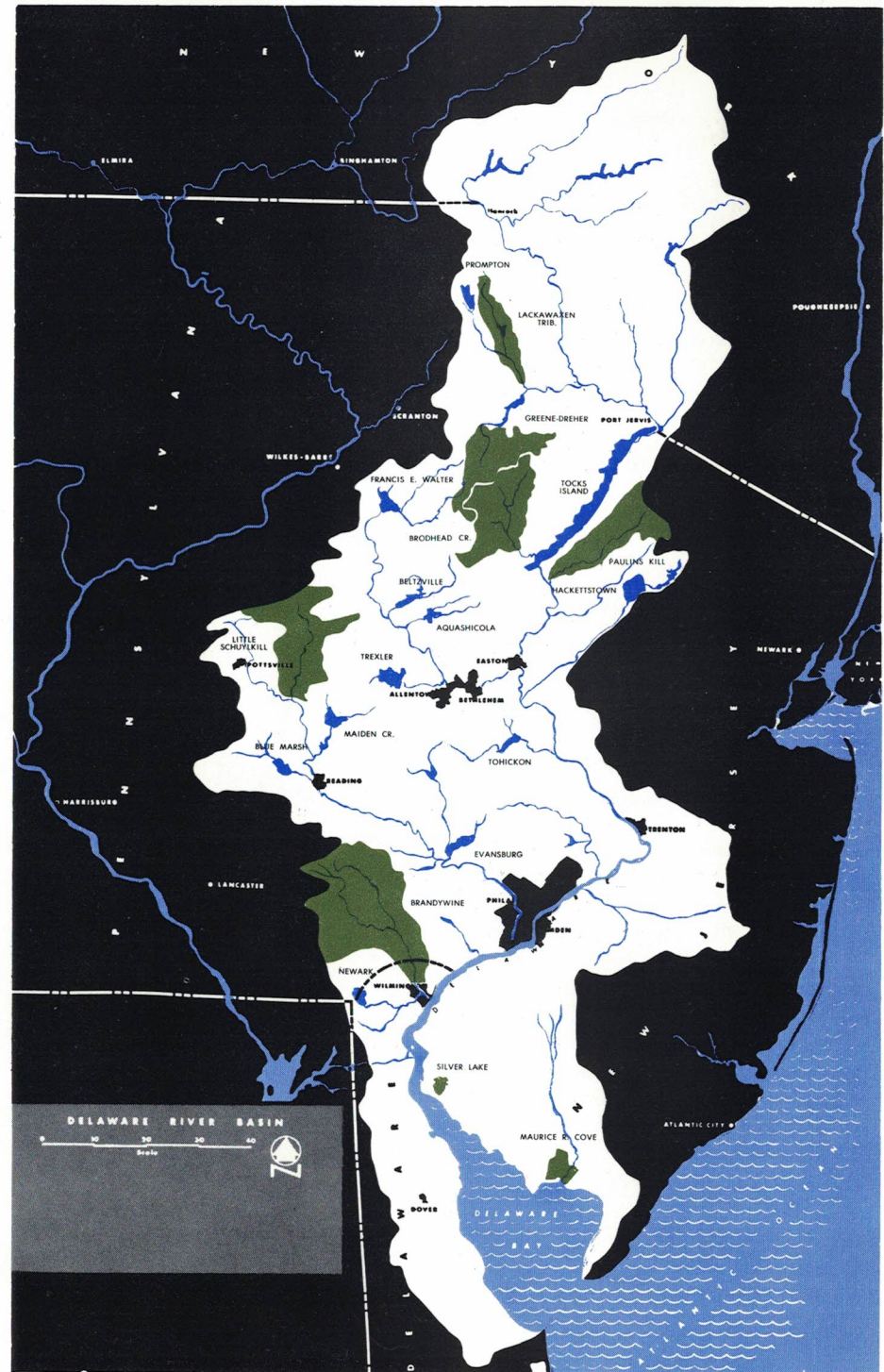
The 100-year renewable duration of the Delaware Basin Compact is reflected in its requirement that the Commission maintain a Comprehensive Plan with sights trained on the needs in the distant future of the 22 million persons who live in the Basin and the area served by it. The Comprehensive Plan is thus the Commission's blueprint for orderly development of the Valley's water resources for all purposes and a means for averting crisis-provoked -- and usually inadequate -- solutions.

The Commission complied with this Compact mandate at one of its early meetings by adopting a First Phase Comprehensive Plan comprising 20 water control projects ranging in size from two quarter-million dollar flood control programs on South Jersey streams to the \$122 million Tocks Island Dam.

Shortly afterward, the Plan was enlarged by the addition of Cannonsville, a New York City reservoir under construction; and existing water supply and waste disposal installations, recreation areas and river stage and stream gauging stations; and, pending formulation of the Commission's own pollution abatement policies, the water quality regional zone classifications produced more than 20 years earlier by Incodel.

As Commission policies evolve in all areas of its authority -- also including recreation, fish and wildlife, water supply, flood loss reduction, hydroelectric power, low flow augmentation, and means of project financing -- it is anticipated that they will be added to the Plan.

-  Major dam and reservoir projects for multi-purpose river control.
-  Local watershed projects consisting of systems of small dams and reservoirs and land treatment measures.



Map shows the projects in Phase One of the Commission's Comprehensive Plan.



The 12 major reservoir projects in the Plan, including Tocks Island, were recommended in the Corps of Engineers' 1960 Delaware Survey Report. Of these, the eight with Federal aid flood control features already have been authorized by Congress for probable construction by the Corps. An advance engineering and design appropriation was voted by Congress last year for Beltzville Reservoir in the Lehigh Valley, and 1964 funds have been requested by President Kennedy for both Tocks Island and Beltzville.

The eight projects authorized by Congress all include major recreation and water supply features as well as flood control, and are to be completed within 25 years. Actually, two of these big reservoirs have been built already by the Army Engineers and are now giving flood protection not provided in 1955. They are to be enlarged for water supply and recreation.

The projected cost of all the projects now in the Comprehensive Plan is \$340 million, of which about \$180 million, or 55 per cent, is to be produced by non-federal sources to pay for water supply, much recreation and some other features. Washington's share of the \$340 million is to be about \$160 million for flood control, recreation and conventional hydro-power.

#### **These are the projects now foreseen by the Comprehensive Plan:**

**Beltzville** — A \$15 million project that in combination with Trexler and Aquashicola Reservoirs will provide flood protection in the Lehigh Valley equivalent to cutting two feet from the 1955 flood crest at Bethlehem, Pa. Beltzville alone will provide 40,000 acre feet of storage for water supply and meet the needs of 500,000 recreation seekers annually.

**Blue Marsh** — A \$15.5 million Schuylkill watershed facility near Reading, Pa., that will contain 14,500 acre feet of storage for water supply and attract 437,500 visitors annually. Will help trim the equivalent of three feet from the 1955 flood peak at Pottstown.

**Trexler** — To be built eight miles from Allentown in a Pennsylvania game preserve, this Lehigh Valley reservoir will cost \$11.2 million and will provide 24,200 acre feet of storage and accommodate 312,500 visitors a year for recreation.

**Prompton** — One of two existing flood control dams to be enlarged to hold 28,000 acre feet for storage and attract some 156,000 visitors each year. This reservoir is already protecting the Honesdale and Hawley, Pa., regions from frequent flooding. It is a \$5.3 million project.

**Tocks Island** — Had this dam been built in 1955, the flood crest at Trenton would have been six feet lower, leaving only minor damage. The \$122 million cost includes 410,000 acre feet of storage and a \$60 million National Recreation Area to accommodate up to seven million pleasure seekers annually. The authorization includes a conventional hydroelectric facility. The terrain is also suitable for construction of a pumped-storage hydro-power installation. Legislation designating Tocks Island as a National Recreation Area is pending in Congress.

**Aquashicola** — Besides helping to provide protection to Lehigh Valley communities from high waters, this \$19.5 million project will accommodate more than 155,000 yearly visitors and hold 24,000 acre feet of storage.

**Maiden Creek** — Reading, Pa., would have enjoyed 4½ feet of flood crest safety which it needed in 1955 had this \$30.8 million Schuylkill Valley reservoir and Blue Marsh been in existence. It will accommodate 625,000 visitors a year and hold 74,000 acre feet of storage.

**Francis E. Walter** — Formerly Bear Creek, this dam near Wilkes-Barre, Pa., completed in 1961 for flood protection of upper Lehigh River communities, will be expanded for 70,000 acre feet of water storage and 250,000 visitors a year at a cost of \$14.3 million.

Four other major reservoir jobs are contemplated for construction by 2010 in the Comprehensive Plan. These are for water supply and recreation facilities to be built on the Musconetcong River near Hackettstown, N.J., on White Clay Creek near Newark, Del., on Tohickon Creek near Newtown, Pa., and at Evansburg, Pa.

Also part of the Plan are eight small watershed programs, two of them well under way in the Brodhead Creek and Greene-Dreher regions of the Pocono Mountains, where 70 lives were claimed by the 1955 flood. One New Jersey small watershed program, at Silver Lake in Salem County, was completed in 1962. Two others, on the Paulins Kill in Warren County and at Maurice Cove in Salem County, are under way. Other watershed operations in the Plan -- and also in progress -- are on the Brandywine Creek, which flows into Delaware from Pennsylvania, and on the Little Schuylkill and Lackawaxen Rivers in Pennsylvania.





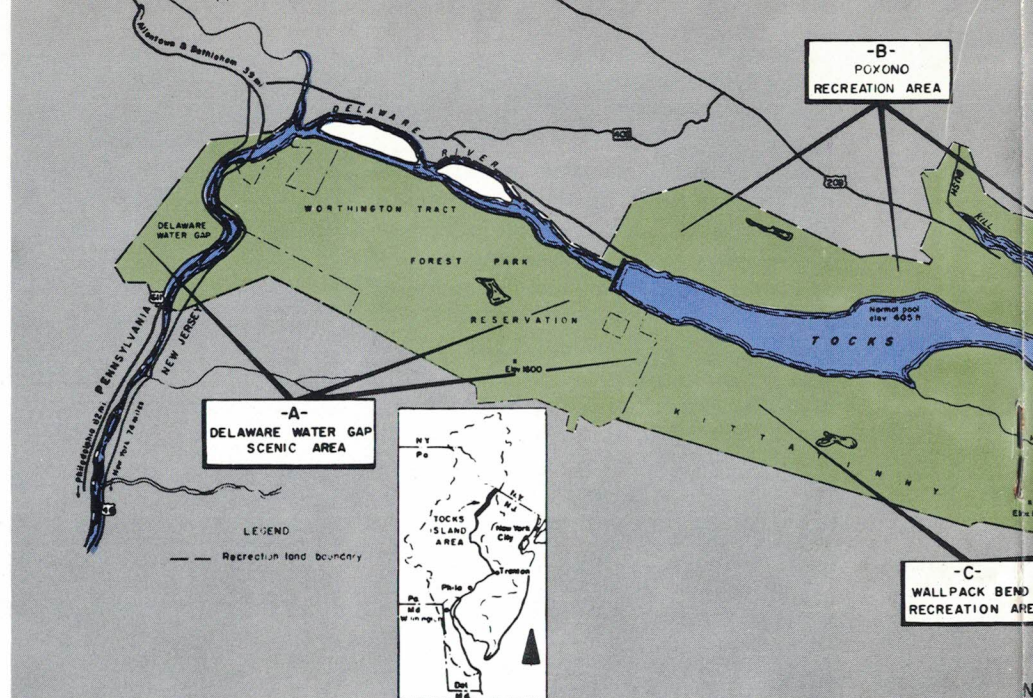
## Tocks Island ... showpiece

Projects that make up a river development system are so interrelated that one facility cannot properly be singled out as paramount in importance. Tocks Island Reservoir is thus one of many links in a chain of installations that will contribute to the orderly development and control of Delaware Valley water resources.

Yet of all the projects recommended by the Corps of Engineers in 1960 that have become part of the Commission's Comprehensive Plan, it is Tocks Island that has aroused the attention and imagination of the public to the greatest degree.

A combination of factors has made Tocks Island the showpiece of the Commission's program. It has a close association with the Delaware Water Gap, since the dam is to be erected only a few miles north of that landmark on the River's main stem. It is the largest and most costly project in the Plan, and the only one for which hydroelectric power generation is now proposed. Its 100-mile shoreline will be encircled by the first major National Recreation Area in the Eastern United States if a Congressional proposal is enacted to implement a National Park Service recommendation. It will be a large contributor to the over all flood protection foreseen for the Basin, as well as a major water supply source.

More than any facility in the Commission's long-range plan, Tocks Island symbolizes the unity that produced the Federal-Interstate Compact under which it is to be built. The 3200-foot-long dam will link Pennsylvania and New Jersey in terms of natural resource development just as they have been linked by a series of modern bridges for transportation. Thirty-seven miles to the northeast of the dam, the reservoir will penetrate miles into New York State, another Compact partner, where much of the drainage area for the lake is located. And despite the distance that will separate it from the dam, the State of Delaware, far to the south, will enjoy the benefits of the project.



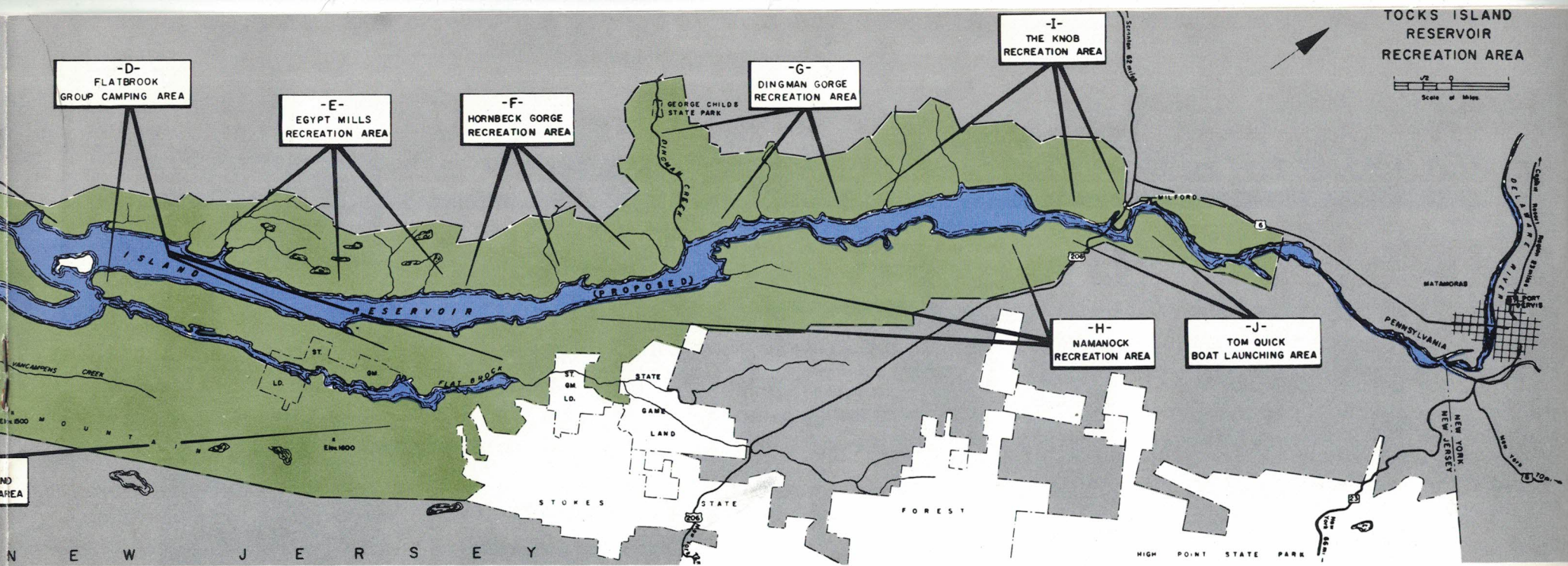
Demonstrated effectively by Tocks Island is the Federal Government's unusual partnership role in the Compact. The combination of the proposed National Recreation Area and federal-supported flood control would mean a deeper financial involvement by Washington than in other Basin projects.

Also, the extent of the water supply purpose at Tocks Island illustrates the expressed willingness of non-federal sources to carry their share of the project burden, since federal funds are available for this benefit on a reimbursable basis only. The densely populated and still growing counties of northeastern New Jersey look to Tocks Island as a major source for solving their future water supply problems.

The water supply factor alone illustrates the magnitude of the Tocks Island facility. The storage potential in this reservoir is greater than that of all the other reservoirs combined in the Commission's Plan.

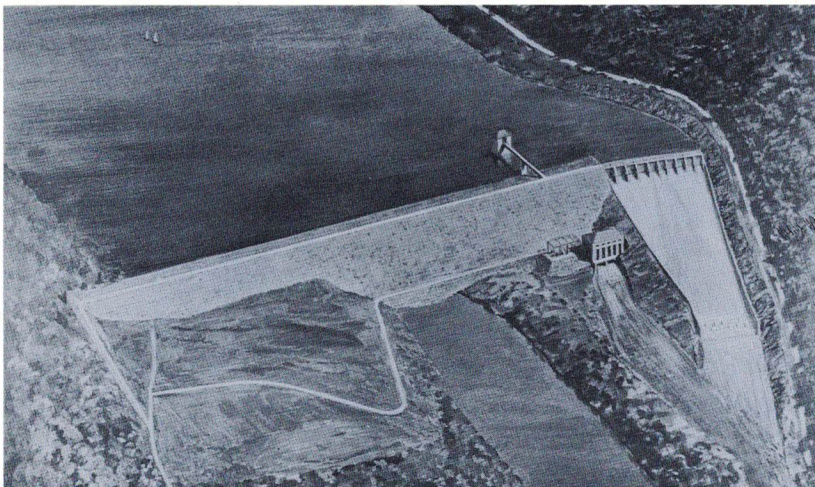
The estimated seven million persons a year attracted to the National Recreation Area at a rate of up to 100,000 visitors daily would add new dimensions to the already important resort industry of the Pocono Mountains in Pennsylvania and the Kittatinny's in New Jersey. One estimate is that each of the seven million visitors will pump about \$6.50 into the area's economy.





The reservoir site is within 100 miles -- or two hours' driving time -- from the homes of about 30 million people. The National Park Service says there is a shortage of outdoor recreation in the area and contends that the Tocks Island plan is ideal to help meet it.

*Artist's rendering of the dam as authorized by Congress.*



Even though completion of the facility may take a decade, effects of the project will be felt as soon as work commences.

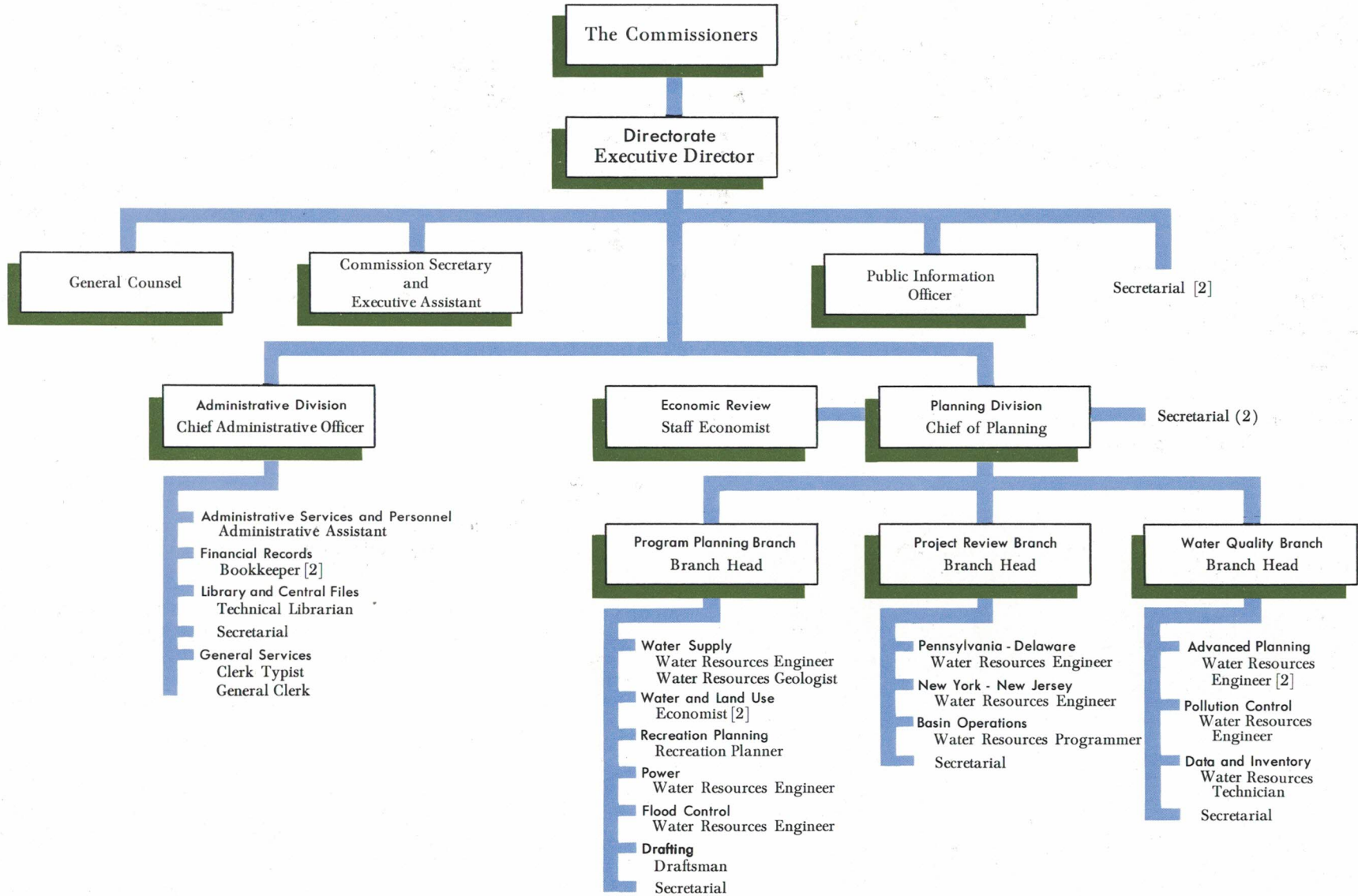
Citizens and organizations of the area already are demonstrating an awareness of the changes the future will bring. The basinwide Water Resources Association is spearheading a drive to establish a Tocks Island Regional Council that would unite the five counties and 107 municipalities of the three-state region in a campaign to guide the area's orderly expansion for land use, transportation, traffic, and other prospective problems and to avert honky-tonk type development.

Congress and President Kennedy authorized construction of the Tocks Island project by the Corps of Engineers in the fall of 1962, and the President has asked the 1963 Congress for \$250,000 for the Corps to begin engineering and design studies on the dam. If this appropriation is made, land acquisition will begin about 1967 and construction soon thereafter.

The projected cost of the Tocks Island project, including a conventional hydro-power installation to produce an average of 281.5 million kilowatt hours a year but excluding a possible pumped-storage hydroelectric facility with a potential annual output of 732 million kilowatt hours, is \$122 million. Here is the cost breakdown: Flood control, \$14.2 million; water supply, \$28.5 million; conventional power, \$21.5 million; and recreation, \$58.2 million.



# The Organization







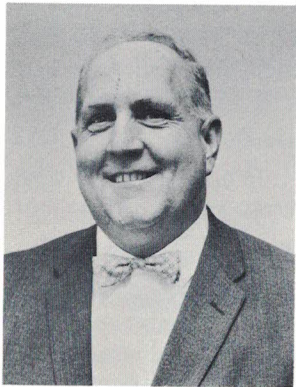
James F. Wright  
*Executive Director*



William Miller  
*General Counsel*



W. Brinton Whitall  
*Secretary*



Arthur E. Peeck  
*Chief Administrative Officer*



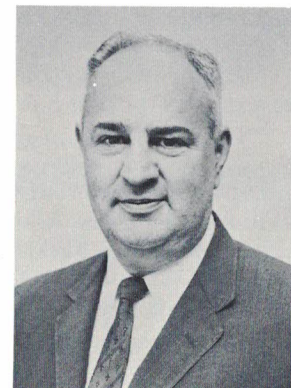
Herbert A. Howlett  
*Chief of Planning*



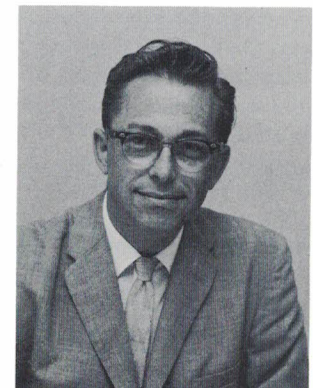
J. W. Thursby  
*Staff Economist*



C. H. J. Hull *Head,*  
*Program Planning Branch*



Theodore Briganti *Head,*  
*Project Review Branch*



Robert Buckingham *Head,*  
*Water Quality Branch*



## Administration

The Executive Director heads an organization that by June 30, 1963 had grown to 36 persons. His own Directorate staff of six includes the General Counsel, the Commission Secretary and the Public Information Officer, who aid the Director in the close association he maintains with the Commission, as well as in his liaison activities with the signatory parties and the public.

Following his appointment as Executive Director at the March 1962 meeting of the Commission, James F. Wright actually commenced his duties on April 16, 1962. Ten weeks later, on July 1, 1962, the total number of Commission employees was six. However, the staff had grown to 22 by January 1, 1963 and to 34 as of the close of the 1963 fiscal year.

A majority of the three dozen members of the Commission staff are engineers and other specialists who will carry out the Commission's planning, coordinating and operating activities for flood control, surface and ground water supply, pollution abatement, water-based recreation, fish and wildlife enhancement, hydroelectric power development, and promotion of soil conservation, forestry and watershed activities.

These water resource experts are assigned to the Planning Division, the agency's technical arm, which is headed by Chief of Planning Herbert A. Howlett, who joined the Commission July 8, 1962. Mr. Howlett's first year with the Commission was divided largely between employing his Division's technical staff members, all but a handful of whom were appointed between January 1 and June 30, 1963, and getting his planning programs outlined and initiated.

The Planning Division is made up of three branches -- Program Planning, headed by Dr. C. H. J. Hull; Project Review, headed by Theodore Briganti; and Water Quality, headed by Robert A. Buckingham.

By the end of fiscal 1963, all but one of the budgeted planning positions had been filled or committed. However, the professional specialists required to staff two of the Division's nine planning programs did not become available until May 1, 1963, and the specialist needed for another program still had not been engaged at the end of the 1963 fiscal year. Yet there was marked progress in training the staff on hand and in compiling data on the Basin's water resources essential to the nine planning programs that will be in full operation during fiscal 1964.

With the Planning Division fully staffed, there will be greater emphasis in the coming year on the policy aspects of the Comprehensive Plan. This work will involve preparation of staff analyses for presentation to the Commission in order that policies can be adopted for the guidance of the staff and the public.

Completing the organization structure is the Administrative Division, under Chief Administrative Officer Arthur E. Peeck, who was appointed July 1, 1962.

During the 1963 fiscal year, procedure manuals were completed and policies established by this Division in major areas of administrative concern, including travel regulations, personnel policies, financial records and accounts, payroll, budget format, technical library, purchasing, and a personnel classification plan. Additional manuals were scheduled for development on systems and forms management, mailroom procedures, book-keeping transactions, and central files. Completion of these will lead to a comprehensive administrative manual.

The Division force that manages the Commission's daily affairs in these and other business matters is made up of seven persons.

In its brief period of existence, the Commission has already had two homes. Until its activities were consolidated on September 19, 1962 at its present headquarters at 25 Scotch Road, Trenton, the agency formally functioned out of the old Delaware River Basin Advisory Committee offices in Philadelphia. However, it actually operated from both locations during a transition period of more than two months during the summer of 1962. There is some prospect that the Commission may have a third home in two years. It has lease its present headquarters until 1965, when it is anticipated it will be moved to a more centralized location in downtown Trenton.





# *Planning Programs*

## **Continuing Inventory of Water Supply**

### ***The Problem***

A continually up-to-date Comprehensive Plan is reliant upon the collection, compilation, evaluation and periodic publication of reliable water crop data. While federal, state and other governmental and private sources collect much basin information, it is not continually compiled in form suitable to permit analyses upon which Commission decisions must depend.

### ***Progress – Fiscal 1963***

A 40-year base runoff period of 1922-1962 was selected and the U.S. Geological Survey was contracted to compute natural runoff at selected stations. Studies of location and characteristics of ground water reservoirs were begun. Data on water diversions to and from the Basin were compiled and analyzed.

### ***Program – Fiscal 1964***

Data collection on surface and ground waters will continue and the natural runoff computation will be completed. So that location can be pinpointed, a stream mileage system will be set up. Water withdrawals and returns will be spotted, tabulated and mapped. Comparison of base-period stream flows to current water needs will be started to determine areas of surplus.

## **Population Analysis and Demands for Land and Water**

### ***The Problem***

Population concentrations, types of land use and water prices all influence water demands. Information on these factors is being collected by government at all levels and private sources, which also are forecasting population shifts and planning land use accordingly. Only the Delaware Basin Commission is empowered to plan for unified Basin development with a view toward compatible and efficient land and water uses.

### ***Progress – 1963***

Population statistics and projections by political subdivisions were recorded for both the Basin and its larger service area according to drainage regions. Reviews were made of local zoning laws and other conditions in local jurisdictions and the Commission's own land use studies were started.

### ***Program – 1964***

Analysis of data on types of water use and consumption as well as population and land use trends will enable the staff to revise and update forecasts of water demands and thus determine areas of potential water surplus and shortage.



## *Programs . . .*

### **Analysis of Recreation, Fish and Wildlife Demands**

#### ***The Problem***

Both the Compact and the needs of a complex modern society mandate that the Delaware's water resources be fully developed to accommodate recreation seekers. In addition to recreational water use, the protection and enhancement of sport and commercial fisheries may set basic standards for water quality and stream flows.

#### ***Progress – 1963***

A map was prepared showing data collected on the location of public recreation, fishing and hunting lands and waters in and near the Basin. Also mapped were population densities to illustrate the distribution of visitors to recreation areas. Under Commission endorsement a four-state study of the Delaware shad fishery was launched, and a general fisheries inquiry was begun in cooperation with signatory agencies. Liaison was established with groups sharing the Commission's interest in the field. The Commission financially supported a Rutgers University shad research project.

#### ***Program – 1964***

Private facilities will be added to the inventory of recreation locations to help step up the study of both facilities and demands. Research into pollution effects on the movement of resident and migratory fish populations in the estuary will be supported to determine the species composition and the reaction of resident fishes to seasonal variations in the chemical quality. Work will continue on the classification of recreation, fish and wildlife resources and facilities leading to the development of a management plan for the Basin.

### **Analysis of Power Potentials and Demands**

#### ***The Problem***

The Basin's water resources have a determinable potential for generating electric power. A balance must be found between this potential and demands for it, since marketing factors are essential to decisions on proposals to establish power installations, private or public.

#### ***Progress – 1963***

Although this program was not staffed until May 1, 1963, development of Commission power policies was begun. Power needs for the Basin were estimated through 1968 and recent technological trends affecting power economics were reviewed.

#### ***Program – 1964***

Studies of the hydroelectric power potential of the Basin, the market for such power and costs and benefits of power development will be continued. New developments in economics and technology of hydro-power will be reviewed.





## Investigation of Projects Proposed by Others

### ***The Problem***

There is a constant flow of plans by public agencies and private sources to undertake projects that could alter the natural flow of water, its quality and even the cost of water downstream. Some installations simply delay runoff through temporary use of water, while others may export water from the Basin. Examples of such projects are dams, waste disposal installations, water supply systems and water using industries. Section 3.8 of the Compact empowers the Commission to screen projects for compatibility with the Comprehensive Plan.

### ***Progress – 1963***

Two sewage treatment projects, six water supply operations, three multi-purpose watershed development programs, a pumped storage hydroelectric power plan and a high voltage line through a future reservoir site were cleared by the Commission under Section 3.8. In addition, efforts to establish regulations to facilitate review procedures among signatory agencies were under way.

### ***Program – 1964***

Review procedure regulations were slated for adoption, and liaison with public agencies and private sources working on water related matters will be stepped up. Under this continuing Commission function, projects will be reviewed as applications are submitted.

## Water Quality

### ***The Problem***

The Commission seeks to attain the objectives of the water quality work started during the 25-year existence of Incodel and to broaden its programs in order to keep abreast of the growth of one of the nation's most heavily populated and industrialized areas. While water quality in the New York State portion of the Basin and some other headwater areas is excellent, there is acid mine drainage in the Schuylkill and Lehigh Rivers, which also have factory and city waste problems near their Delaware confluence. The Basin's main water quality problem area, the Delaware estuary, is marked by the large volumes of industrial and municipal waste it receives, as well as salt water intrusion and turbidity.

### ***Progress – 1963***

The Incodel regional zone classifications were incorporated in the Commission's Comprehensive Plan on July 1962 and Incodel's activities and personnel were absorbed in January 1963. The staff compiled Basin water quality data and inventoried waste treatment facilities throughout the Valley. A board of two consulting engineers and a water resources economist was engaged to help formulate a long-range water quality management program and a master policy to become part of the Comprehensive Plan. Commission representatives served on technical and advisory committees of the Public Health Service's Delaware estuary study.

### ***Program – 1964***

As the Commission continues to coordinate activities among pollution control agencies, present-day adequacy of the Incodel standards will be studied and compliance by industries and municipalities will be determined. A continuing inventory of locations, quantities and qualities of return flows will be maintained. Formulas for equitable allocation of costs for maintaining regional water quality will be researched.



## *Programs . . .*

### **Comprehensive Plan and Water Resources Program**

#### ***The Problem***

In recognition of the interrelation of interests and needs throughout the four Basin states, the Compact requires the Commission to maintain a Comprehensive Plan for the Valley's development on a continually updated basis. In addition, it calls for annual adoption of a Water Resources Program, based on the Plan, presenting the Basin's needs and the projects required to meet them.

#### ***Progress – 1963***

Work commenced on formulating policies for the Comprehensive Plan on both hydroelectric power and recreation, fish and wildlife. Preparations were made for expanding and revising the Comprehensive Plan and a preliminary draft of the first Water Resources Program was submitted for Commission consideration.

#### ***Program – 1964***

Studies of alternative means of financing construction of projects and of methods for the Commission to recover reimbursable costs from beneficiaries of project features will be initiated. Procedures for determining benefits, cost allocations and priorities among Basin projects will be recommended. The revised Comprehensive Plan outline will be completed and policies for inclusion in it will be presented to the Commission.

### **Flood Loss Reduction**

#### ***The Problem***

Homes, businesses and industries continue to crop up on land that is vulnerable to occasional yet severe floods. There is a lack of awareness of the hazards, and construction of even modest flood control measures tends to instill a false sense of security among flood plain dwellers. In addition, it is often economically infeasible to build expensive facilities to protect even a highly developed area from floods that are extreme but infrequent. The Commission must exercise leadership in alerting the public to the hazards, in providing information on flood locations, frequency, duration and inundation and in establishing programs to reduce loss of life and property damage.

#### ***Progress – 1963***

Studies were begun of published material in the field and of action and information programs of other agencies. Channel encroachment laws, local flood plain zoning provisions, building codes and subdivision regulations were reviewed in preparation for a Basinwide plan. This program was not staffed until May 1963.

#### ***Program – 1964***

Key flood plain hazard areas will be mapped. Guides for effective use of undeveloped flood plains will be drawn. Existing flood forecasting and warning systems will be reviewed and supplemental programs planned. Efforts will be initiated to integrate warning and forecasting systems with related enlightened programs affecting flood plain buildup, such as urban redevelopment, open spaces and tax incentives to low-hazard flood plain users. A cooperative atmosphere among all interested elements will be encouraged.



## Basin Operations



### *The Problem*

A river system such as the Delaware offers innumerable prospective combinations for operation. For example, adjustments can be made to intercept forecasted flood waters by transferring supplies being held for downstream needs to an off-stream reservoir. Also, excess flows can be pumped to an off-stream reservoir to produce hydro-power in later high demand periods when river flows are inadequate. Through the use of computers, it is now possible to develop an efficient, integrated plan for operating all projects in a river system. Since such a plan should be developed early in a basin's development, the Delaware Basin Commission is in a good position to profit from this new approach.

### *Progress – 1963*

Although the position assigned to this program was not filled during the year, research was initiated into the use of automated operations in other basins.

### *Program – 1964*

Methods of processing data on water resource withdrawals, return flows, population, land use, and other factors will be tested and applied to the Commission's program where economies are indicated.

## *River Conditions*

Sustained drought conditions marked the 18-month span covered by this report. Surface stream flows generally were below normal, reaching critical proportions in the northern tier of the Basin, and reservoir water levels were very low.

The lowest May-to-October flow volume on record was tabulated in 1962 at Trenton despite upstream reservoir releases. Forty per cent of the river water that passed Trenton in July 1962 came from upstream supplies. Water lines at New York City's Pepacton and Neversink Reservoirs in the Catskill Mountains hit new lows. The dry spell continued into 1963, the first half of which marked Trenton's all-time low for precipitation.

While seasonal ground water declines during the warm months of 1962 were replenished by the end of the year, sharp drops and many new lows in wells were recorded at key locations in the Basin from February through mid-1963.

Considering the prolonged period of low flows and hotter-than-average summer months in 1962 and 1963, no significant changes in the quality of the water in the Basin's streams were observed aside from the upstream progress of the salt water from Delaware Bay.

Quality of the River's headwaters was excellent. Water passing Trenton had a good oxygen level and was suitable for most purposes. Industrial and domestic wastes from the highly populated and industrialized Philadelphia metropolitan area had a serious influence on the River's chemical quality.

The number of serious fish kills was high. There were four within 13 months due to low oxygen or high toxic counts in the water. The first and largest -- of hundreds of thousands of herring -- occurred between Bristol and North Philadelphia in early-June 1962. Others were late in August 1962 in the Easton Area, June 4 to 6, 1963 near the southern limits of Philadelphia and June 20, 1963 below the Burlington-Bristol Bridge.

After a virtual 20-year absence of shad from the Delaware, once celebrated as a shad stream, 1962 marked the return of the species with a fine run. This was followed by an even greater run in 1963, when one commercial fisherman at Lambertville reported the greatest single net catch since 1896.



# Auditor's Report

## ERNST & ERNST

FIDELITY-PHILADELPHIA TRUST BLDG  
PHILADELPHIA 9, PA.

Delaware River Basin Commission,  
Trenton, N. J.

We have examined the balance sheet of the Delaware River Basin Commission as of June 30, 1963, and the related statement of revenues and expenditures for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances, and nothing came to our attention to indicate that moneys received by the Commission have been expended other than in accordance with the provisions of the Delaware River Basin compact.

Office furniture and equipment and automotive equipment budgeted and acquired during the year have been treated as current expenses and are not included in the balance sheet.

In our opinion, the accompanying balance sheet and statement of revenues and expenditures present fairly the financial position of the Delaware River Basin Commission at June 30, 1963, and the results of its operations for the year then ended, in conformity with generally accepted accounting principles.

*Ernst & Ernst*

Philadelphia, Pa.  
July 24, 1963





## Budget Distribution

### REVENUES

1963 (Actual)	1964 (Anticipated)
Delaware 13,000	16,000
New Jersey 80,000	117,000
New York 80,000	117,000
Pennsylvania 80,000	117,000
U.S. 100,000 (1)	117,000
Public Health Service Grant 23,255	45,900
Miscellaneous 63	100
Appropriation Surplus (Previous Year) 45,155	
<b>TOTAL</b> 421,473	<b>530,000</b>

(1) \$20,000 Received in 1963  
from 1962 Federal Allocation.

## Fiscal Year 1963 and 1964

### EXPENDITURES

#### By Organization

1963 (Actual)	1964 (Anticipated)
Directorate 90,163	94,012
Administrative Division 50,979	65,706
Planning Division 203,488	370,282
<b>TOTAL</b> 344,630	<b>530,000</b>

#### By Program

WATER SUPPLY	31,810	39,900
WATER DEMAND	34,190	42,000
RECREATION	18,200	27,600
POWER	21,850	33,100
PROJECT REVIEW	63,380	82,000
WATER QUALITY	83,370	126,900
COMPREHENSIVE PLAN	69,230	131,000
FLOOD LOSS	13,160	29,200
BASIN OPERATION	9,440	18,300
<b>TOTAL</b> 344,630	<b>530,000</b>	

Unexpended Balance 1963  
Carried Forward to 1965

#### GRAND TOTAL

421,473



## A Tribute to ...

Three men whose pooled leadership, imagination and energy proved to be indispensable to the success of the Compact negotiations and who have turned to other pursuits since its enactment are Walter M. Phillips, John P. Robin and James Kerney Jr.

As Chairman of the Delaware Basin Advisory Committee, then the symbol of the river development aspirations of the four states and Cities of Philadelphia and New York, Mr. Robin was both the campaign's forceful leader and its vital link to the Commonwealth of Pennsylvania.

Mr. Phillips was more than the Advisory Committee's tireless Executive Secretary. His contributions were especially effective in designing public information programs and in garnering essential citizen group support throughout the Basin as well as in his native Philadelphia, where he was already a leader in community affairs.

His prominence and his long background as a newspaper editor gave Mr. Kerney a combined role as key liaison man not only with his home State of New Jersey but the Nation's Capital while he was Executive Vice President of the Water Research Foundation.



Walter M. Phillips



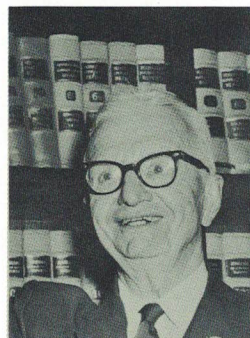
John P. Robin



James Kerney Jr.

Carrying the banner alone for years in behalf of concerned Basinwide planning was Incodel, which was absorbed last January 1 by the new Commission. Executive Secretary of Incodel for a quarter-century was James H. Allen, who, as the 1962-63 year drew to a close, planned soon to enter retirement.

## In Memorium ...



Rep. Francis E. Walter

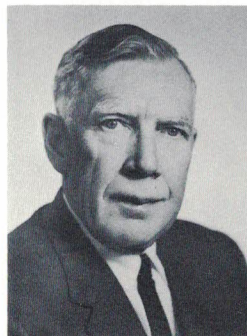


David A. Robertson

Intimately associated with Delaware Basin planning were two persons -- one as an influential member of Congress and the other as an important engineer in the Commission's family of water resource specialists -- who died in 1963.

Representative Francis E. Walter had represented Pennsylvania's 15th District for more than 30 years in the House of Representatives, where his was the leading voice in Delaware conservation affairs. Only a few months before his death on May 31, in a talk at Weatherly, Pa., he expressed pride in the part he had played in the success of the Delaware Basin Compact. Bear Creek Dam, part of the Commission's Comprehensive Plan, recently was renamed for him.

David A. Robertson had been Head of the Commission's Water Quality Branch less than four months when his untimely death occurred on March 22 at the age of 37. He had brought to the staff an outstanding record as a sanitary engineer with the U.S. Public Health Service, Ohio River Valley Water Sanitation Commission, the States of Virginia and North Carolina and the City of Fredericksburg, Va.



James H. Allen





*Looking south at Delaware Valley through infra red camera six miles up from just north of Trenton, center left. Visible are Philadelphia area, upper right, Cape May Point, top center, and Jersey coast, upper left.*





