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THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

PROCEEDINGS

INCODEL ANNUAL CONFERENCE

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POCONO MANOR, PENNSYLVANIA

September 19-22, 1961

C O N T E N T S

FOREWORD

CONFERENCE PROGRAM

A. Conference Reports

B. Registration List

PUBLIC DISCUSSION

FOREWORD

Incodel's 1961 Delaware River Basin Water Resources Conference was held at Pocono Manor Inn, Pocono Manor, Pennsylvania on September 20-21, 1961.

Attending this year's Conference were about 250 federal, state and local governmental officials, industrial and business representatives and members of the League of Women Voters from the Delaware River Basin and nearby areas.

The Proceedings of the Conference are divided into two parts.

Part One includes a copy of each of the reports, in their entirety or in digest, which were given at the Conference sessions. Also included is a registration list showing the names and addresses of everyone who registered at the Annual Conference. A copy of the Conference program is on the following two pages.

Part Two of the Proceedings is comprised of the Public Discussion on the Proposed Activities and Programs of the Delaware River Basin Commission. This transcript represents the complete hearing as it was stenographically recorded and includes a separate table of contents.

Delaware River Basin Advisory Committee

and the

Interstate Commission on the Delaware River Basin

PROGRAM

DELAWARE RIVER BASIN WATER RESOURCES CONFERENCE
Pocono Manor Inn, Pocono Manor, Pennsylvania
Wednesday-Thursday, September 20-21, 1961

WEDNESDAY FORENOON, SEPTEMBER 20, 1961 - Francis A. Pitkin, Chairman, Interstate Commission on the Delaware River Basin, presiding.

A SERIES OF STATUS REPORTS ON DELAWARE RIVER BASIN PROGRAMS

10:00 A.M. - INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN
- Francis A. Pitkin, Chairman, Incodel

10:15 A.M. - U.S. ARMY ENGINEERS DELAWARE RIVER BASIN SURVEY
- Colonel T. H. Setliffe, Philadelphia District Engineer; U.S. Army Engineers

10:35 A.M. - PUBLIC LAW 566 PROJECTS IN ARMY ENGINEERS PLAN
- Alvin C. Watson, River Basin Representative, Soil Conservation Service, U. S. Department of Agriculture

10:50 A.M. - TOCKS ISLAND NATIONAL RECREATIONAL AREA
- Allen T. Edmunds, Chief, Div. of Recreational Planning, Region V, National Park Service, U. S. Department of Interior

11:10 A.M. - BARRIERS FOR DEVELOPMENT OF WATER SUPPLIES IN REGIONS BORDERING ON TIDAL ESTUARIES
- General Norman Lack, Vice Chairman, Delaware River Basin Advisory Committee.

11:40 A.M. - INTERSTATE FEDERAL COMPACT FOR DELAWARE RIVER BASIN
- John P. Robin, Chairman, Delaware River Basin Advisory Committee, presented by Walter Phillips, Executive Secretary.

WEDNESDAY AFTERNOON, SEPTEMBER 20, 1961 - James Kerney, Jr. Executive Vice President, Water Research Foundation and member of Incodel, presiding.

REPORTS ON NATIONAL WATER RESOURCES PROGRAMS AND PROPOSALS

2:30 P.M. - THE 1961 FEDERAL WATER POLLUTION CONTROL ACT

Sylvan C. Martin, Regional Engineer,
Region II - U. S. Public Health Service

3:00 P.M. - CURRENT STATUS OF WATER SUPPLY ACT OF 1958

- Brigadier General T. H. Lipscomb, North Atlantic Division Engineer, U. S. Army Engineers

3:30 P.M. - PROPOSED WATER RESOURCES PLANNING ACT OF 1961

Mitchell Wendell, Esq., Consultant, New York State Joint Legislative Committee on Interstate Cooperation

4:00 P.M. - GENERAL DISCUSSION

THURSDAY SEPTEMBER 21, 1961 - Charles R. Bensinger, President, Water Resources Association, presiding.

10:00 A.M. to 4:00 P.M. - A PUBLIC DISCUSSION ON PROPOSED ACTIVITIES AND PROGRAMS OF THE DELAWARE RIVER BASIN COMMISSION

Participants will include interested parties and representatives of numerous agencies or organizations, who will present verbal statements, not more than 15 minutes in length, concerning the initial and longer term activities of the Delaware River Basin Commission which will be created by the Interstate-Federal Compact for the Delaware River Basin. Written statements of any length may also be submitted for the record.

THURSDAY EVENING, SEPTEMBER 21, 1961 - Francis A. Pitkin, Chairman, Incodel, Master of Ceremonies

6:30 P.M. - RECEPTION

7:30 P.M. - BANQUET

- THE DELAWARE RIVER BASIN PROGRAM

John P. Robin, Chairman
Delaware River Basin Advisory Committee

THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

ANNUAL REPORT OF THE CHAIRMAN

Francis A. Pitkin,
Chairman, Incodel

September 20, 1961

INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

ANNUAL REPORT OF THE CHAIRMAN

Incodel Annual Business Meeting
Pocono Manor, Pennsylvania
September 19-22, 1961

On behalf of the Interstate Commission on the Delaware River Basin (Incodel) and the Delaware River Basin Advisory Committee, the co-sponsors of this 1961 Water Resources Conference, I bid you all a most cordial welcome.

We are confident that the participants in our program will provide an interesting and enlightening array of information and ideas relating to the field of water resources. It is our hope that each of you attending this Conference will benefit from the presentations according to your specific interests and the activities of the organizations you represent.

To me, this annual Water Resources Conference is a grand and glorious occasion. It marks Incodel's 25th anniversary and, by the same token, my 25th year as a member of the Commission. During the last 13 years of this past quarter century, I have had the privilege of serving as Incodel's chairman. This has been an honor and a very great pleasure. Personally, I am elated that this anniversary year has been crowned by the completion and general acceptance of the Army Engineers comprehensive plan for the control and development of the water resources of the Delaware River Basin and by the ratification by the four Basin states and the Federal Government of a compact for the implementation of this plan.

At this point you will bear with me, I am sure, while, as befits an old-timer, I reminisce a little bit. I want to take you back to the Incodel Conference of eleven years ago, 1950. At that time, much like now, we were tingling with enthusiasm as new plans for the River Basin were taking shape. Incodel then was just concluding a special survey to determine the advisability of having the Basin states carry out an integrated program for the mutual utilization of the waters of the Delaware River watershed. Shortly after this 1950 annual meeting, in January, 1951, Incodel filed a report covering its recommendations for the administration and development of the water resources of the Delaware River Basin with the Governors and Legislatures of its four supporting state governments.

Those recommendations, you may recall, called for the enactment of a four-state compact to establish a Delaware River Basin Water Commission with power and authority to construct and operate a clearly defined program for the control and utilization of the Basin's water resources.

We were delighted when New Jersey and Delaware in 1951, and New York State in 1952, approved and adopted the Incodel Plan. But we were shocked when the fourth state, Pennsylvania, failed to join its sister sovereignties. The story of the unfortunate fate of the Incodel plan in Pennsylvania has been told many times and it is not my intention to retell it now. It is much more satisfying to remind you that many of the principles upon which the Incodel Plan was based are now part and parcel of both the Army Engineers' physical plan, and of the Interstate-Federal compact, for the control and utilization of the waters of the Delaware River Basin.

Incodel is proud to have pioneered the concept of intergovernmental cooperation in the planning and execution of a comprehensive river program

in the Delaware Basin. It is very gratifying to have had this service recognized by the Resolution adopted on February 1 of this year by the Governors of the Basin states and the Mayors of the Cities of New York and Philadelphia which reads as follows:

"Resolved: The Governors and Mayors concerned with the development of welfare of the Delaware River Basin wish to express, on behalf of their states and cities and on their own behalf, deep appreciation to Incodel and its members for the work which they have done over the years which has led in an evolutionary way to the draft of interstate-federal water resources compact approved at this meeting."

Thus, in consideration of both past and present situations, it seems to me we can say that this year we are witnessing not only a mutual agreement among the four states and the Federal Government to open a whole new era of planning, management and development of the water resources of the Delaware River Basin, but also the fulfillment of Incodel's objectives in these regards.

From its very inception in 1936, Incodel was established for the purpose of entering upon a program to develop integrated plans to conserve and protect the waters and other resources of the Delaware River Basin. Incodel was quick to recognize the seriousness and importance of the stream pollution problem in the Delaware River Basin as it then existed. As the story goes, if you think things are bad now, you should have been around when - - - - - - - . Sparing you the details, the streams of the Delaware Basin were in deplorable condition and no one, except Incodel, seemed to be much concerned.

Incodel's initial objective was to develop a program for coping with the very serious pollution problem. Such a program was perfected in 1939 after two years of intensive study. The basin wide water pollution control plan was immediately adopted by the four Basin States as the guide for putting an end to unwarranted pollution in the Delaware River and its tributaries. The administration of the program, properly, I believe, was left to the water pollution control agencies of the respective states. This very first accomplishment of Incodel has been carried out by these agencies concurrently, harmoniously and continuously, with Incodel acting as the coordinating agency.

During this past year, Incodel has continued its study of the Army Engineers' proposed physical plan for the control, development and utilization of the Delaware Basin water resources. We are pleased to restate that it appears to us that this plan, when put into effect, will result in the substantial resolution of many of the water problems confronting us today.

The Incodel staff has devoted many hours to a study of the feasibility of each of the projects called for in the Engineers' physical plan. Specifically, it has attempted to look ahead into the anticipated allocation of non-federal costs of these projects among non-federal interests. We feel that you will be glad to know that questions of this sort, which will ultimately move into the realm of great importance, are being considered well ahead of time.

Since the publication of the proposed interstate-federal compact in February, 1961, when it was presented to the Governors and Mayors for their approval, Incodel has carefully evaluated its contents. It was agreed by the Commission that, while no document dealing with such a complex subject can satisfy everyone in every particular, the compact drafted by the Delaware

River Basin Advisory Committee offers a practical and desirable approach to the effective administration of the Basin's water resources. As many of you know, the Interstate-Federal Compact was approved by Incodel with the assurance of the Commission's complete support.

Incodel's Water Pollution Control Program, has progressed significantly during the past year. The projects in this program were undertaken largely as a result of the enactment of the Federal Water Pollution Control Act of 1956. The inventory of various sources of water pollution in the Basin has been maintained and extended. This inventory shows a continuing increase in the number of sewage treatment facilities constructed in the Basin to meet growing municipal and industrial needs.

The Lehigh University Institute of Research project, sponsored by Incodel, to develop an automatic and continuous water quality monitoring system on the upper Delaware River, has been enlarged through the installation and operation of two new monitoring stations. They are located on the Delaware River at Montague, New Jersey and at the Pennsylvania Power and Light steam generating station at Martins Creek, Pennsylvania. All three stations are now in full operation continuously measuring six water quality parameters.

This program reflects an effort by Incodel to improve water pollution control through increased and continuous surveillance of river quality and conditions.

Another research project, being prosecuted by the Lehigh University Institute of Research for Incodel, attempts to determine if stack dust, a waste product of the cement industry, can be used practicably for the neutralization and reclamation of acid streams, lakes and ponds. Once again,

we are pleased to report that this research project has progressed satisfactorily. The results indicate quite clearly that unproductive acid waters can be restored to a state of usefulness, particularly for recreation, by the application of stack dust.

In June of 1961, Incodel published a highly technical report entitled, "Dispersion Studies on the Delaware River Estuary Model and Potential Applications Toward Stream Purification Capacity Evaluations". Many of you have received a copy of the report. This project was a joint venture of Incodel, the Delaware Water Pollution Commission, the Departments of Health of New Jersey and Pennsylvania, the City of Philadelphia and the U. S. Public Health Service.

The experiments involved in this study were designed to determine the time of transit and to trace the dispersion of pollutants in the Delaware Estuary. There is a great deal to be learned from a close study of this highly complex and detailed study.

In addition to these specific projects, which I have admittedly only touched upon very briefly, Incodel has maintained its public relations programs as in years past.

At this juncture before closing this report, I am going to restate an appeal I made at the 1957 Incodel Annual Conference of four years ago.

At that time, as the result of studies made by the Army Engineers, it was clearly established for the first time that it was feasible to build a dam on the main stem of the Delaware River at Tocks Island.

In the light of this new knowledge and, in view of the fact that a reservoir at Tocks Island would provide much more storage capacity at a much smaller cost per unit of storage capacity than would an alternative reservoir at Wallpack Bend, I urged that every effort should therefore be

made to secure Congressional authorization for the Tocks Island project in 1958. I failed to get wholehearted support of this proposal then, mainly, because the Army Engineers comprehensive plan for the entire Basin had not yet been fully crystallized.

Since this situation no longer applies, I now renew my plea. Let us all, before this Conference is ended, dedicate ourselves to a campaign designed to secure Congressional authorization in 1962 for the construction of the Tocks Island multiple-purpose flood control project. Let us at this same time call upon the Congress to appropriate funds for the preparation of construction plans and specifications for this project. Tocks Island is the keystone of the comprehensive plan for the development of the water resources of the Delaware River Basin. Now is the time to start beating the drums for its construction at the earliest possible date. One of my life's fondest ambitions will be realized when the dirt begins to fly on this project.

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THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

U. S. ARMY ENGINEERS DELAWARE RIVER BASIN SURVEY

Colonel T. H. Setliffe,
Philadelphia District Engineer
U. S. Army Engineers

September 20, 1961

U. S. ARMY ENGINEERS DELAWARE RIVER BASIN SURVEY

Colonel T. H. Setliffe,
Philadelphia District Engineer;
U. S. Army Engineers

Jim Allen has asked me to bring you up to date on the status of the Delaware River Basin Report. The District Engineer forwarded the report to the Division Engineer, North Atlantic Division, on 16 December 1960. As you may recall, this report presented the following plan of improvement.

1. Eleven major water control projects for multi-purpose development.
2. Eight major water control projects for development, initially for recreation and with later additional development for water supply.
3. Thirty-nine small flood control projects, all of which can be accomplished under existing programs.
4. Related supplemental programs for controlled use of the flood plains, land and land cover management, conservation of ground and surface waters, preservation and enhancement of recreation, enhancement of fishing and hunting resources and preservation and improvement of water qualities.

There are the familiar 11 major projects recommended in the report, three do not require Congressional authorization because they are non-Federal projects. Hawk Mountain for power, water supply and recreation; Newark for water supply and recreation, and Christiana also for water supply and recreation.

Consequently, when we sent our Report forward, it contained a recommendation for Congressional authorization of the remaining eight major multi-purpose projects, in other words, those requiring Federal funds. Our studies had indicated that these eight would be needed in the next 30 years.

You remember that there is a lot to the report besides building dams, among the other things is land acquisition. The report also recommends that

land acquisition programs be established and executed at an early date to preserve the project sites.

The Division Engineer, North Atlantic Division, concurred with my recommendations and forwarded the Report to the Chief of Engineers on 27 December 1960, commenting as follows. "It is pertinent to emphasize, however, that the intricate and interrelated structure of the plan may be nullified by continuing encroachment and incompatible development of the project areas unless a vigorous program for preservation of the sites is undertaken at an early date. A proposal for such action is included among the District Engineer's recommendations."

Copy of the District Engineer's conclusions and recommendations, as noted in Paragraphs 249, 250 and 251 of the main report, plus copy of the Division Engineer's indorsement, will be available later in the other room.

On 9 August 1961, I was privileged to explain the Delaware River Basin Report to the Board of Engineers for Rivers & Harbors. My presentation was essentially that given previously to over 40 other audiences and over 6,000 people, you people know it is the "HEARINGS IN REVERSE" presentation.

I understand the Board staff has completed its report and that it is on Major General Keith Barney's desk for his signature as President of the Board. At the same time, the Chief of Engineers' staff has prepared a paper for General Wilson's review.

I believe the only changes made by either staff are minor.

My hope is that the Report will be forwarded to the Governors and Mayors within the next 15 to 30 days.

Now, what of the recommended projects not requiring Congressional authorization? I refer, of course, to the 36 small flood control dams which can be constructed under authorities contained in Public Laws 685 and 566. (Three other small dams require additional authorization). We do know that the Water

Resources Association has advised the County Commissioners that these small projects need no further authorization. As a result, we have received requests for further information on the procedure for requesting construction of such small dams from Mr. Arthur F. Loeven, Director, Montgomery County Planning Commission, Pennsylvania, Mr. H. Ray Saunders, Chief Clerk, Monroe County Commissioners, Pennsylvania, Mr. Mortimer Michaels, Chairman, Sullivan County Board of Supervisors, New York, Mr. Richard Heil, Chief Clerk, Northampton County Commissioners, Pennsylvania.

In addition, we have met with the Northampton County Commissioners at Easton, Pennsylvania, on 12 May 1961, the Sullivan County Supervisors at Monticello, New York, on 23 May 1961 and with the Montgomery County Planning Commission on 2 June 1961.

We see that interest in these small projects is growing and we, of course, are happy to be of assistance.

With regard to the inquiry from Monroe County, note that in May 1959, my office agreed with the Soil Conservation Service providing Federal assistance in developing the Brodhead Creek watershed.

As a matter of fact, the Soil Conservation Service has completed work plans for two of these small dams. (Project PC-5 - on a tributary of Buch Hill Creek, BU-1 - on Leavitt Branch, a tributary of Brodhead Creek.)

Recall General Lipscomb's emphasis on flood plain zoning. In July 1960, the Government took an important step in the utilization of the flood plains - Section 206 of Public Law 86-645 - the Flood Control Act of 1960 which authorized the Chief of Engineers to compile and disseminate information on floods and flood damage, including identification of areas subject to inundation by floods of various magnitudes and frequencies, provide general criteria for guidance in the use of flood plain areas and provide engineering advice to local interests for their use in planning to ameliorate the flood hazard.

Any request for this service must be forwarded through the proper state agency. We give it an initial evaluation, then it must get the approval of the Chief of Engineers.

It's important to remember in connection with this new service that funds are limited to only one million dollars in any one fiscal year for the entire nation.

So far we have received one application from the Montgomery County Planning Commission for a study of areas along the Wissahickon Creek. This application was submitted to us on 8 June 1961, studied by us, forwarded to the Office of the Chief of Engineers in Washington. Funds to begin this study have not yet been made available to us. When funds are received, we will compile the pertinent information.

Another group is considering applying for assistance. Officials of Bucks County met with us to discuss a possible application for study of upper Neshaminy Creek and the County shore along the Delaware River. A resume concerning Flood Plain Information studies under Section 206, PL 86-645, will be available in the next room.

You recall that our report recommended for the early acquisition of project lands. Some of you are acquiring land now. The Commonwealth of Pennsylvania through its Department of Forests and Waters, was and is already taking steps to acquire the land around the proposed Tohickon Dam Site in northern Bucks County; it has begun development of the area as a recreational site. When completed, the park will contain facilities for beach bathing, boating, fishing, camping, organized group activities, and nature studies.

We are often asked the question, what "guesstimate" can we make on a schedule for authorization and appropriations? In trying to answer the question, I must start with the premise that the report will receive little better than routine action.

Let us assume, prayerfully, that the Board of Engineers' formal report is signed by 22 September 1961. About two weeks later, with all optimism, on 6 October, the Chief of Engineers could send the report to the Governors and the Agencies concerned.

Following the return of the Report, the Chief of Engineers could forward it to the Secretary of the Army on 19 January 1962. Note here that this period (6 October - 19 January) allows the full 90 days for replies from the Governors plus two weeks for OCE to decide what to do about a possible controversial letter received on the 90th day. I understand that Mr. Bensinger and Mr. Dressler have in mind some steps to improve the 90-day reaction time by Governors and heads of Federal agencies. Some indorsements are probably already written.

Once we get all this behind us the Secretary of the Army can forward the Report to the Bureau of the Budget on 26 January.

I understand the Bureau of the Budget has already indicated it has no objection to presentation of the report to the Public Works Committees. The Bureau of the Budget could send its reply to the Secretary of the Army on 2 February and on 9 February 1962, the Secretary of the Army could forward the Report to Congress. Then, during March, Congress will take the first steps toward authorization.

A check of a number of project documents shows that March is the most frequent month for "referral to the Committee on Public Works and ordered to be printed". (This is the first formal action taken by Congress toward authorization of a project.)

The Report could be authorized by Congress in July 1962.
If Congress includes the Delaware Basin project in an omnibus bill, it almost certainly will not be authorized before July, possibly later, because Congress does not get around to omnibus authorization bills earlier. If a separate bill

as sponsored, it might get through earlier.

The next step will be to obtain assurances of local cooperation, and this could take us to June 1963, and I point out that it often takes quite some time to get local assurances.

Following this appropriation might be recommended in June 1963.

Following this we could receive our first appropriations in July 1964.

This is about the best "guesstimate" I can give you at the moment. It is based upon experience with past projects. I reiterate that the Water Resources Association (Bensinger, Dressler, and Company) and Congressman Walter are trying to improve the schedule, particularly on Tocks Island. That's another story you will have to get from them.

Thank you for having the Philadelphia District with you.

THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

PUBLIC LAW 566 PROJECTS IN ARMY ENGINEERS PLAN

Alvin C. Watson,
River Basin Representative
Soil Conservation Service
U. S. Department of Agriculture

September 20, 1961

PUBLIC LAW 566 PROJECTS IN ARMY ENGINEERS PLAN

by Alvin C. Watson, River Basin Representative
Soil Conservation Service, U. S. Department of
Agriculture

SLIDE 1 - Map of basin

It is a pleasure to participate in this water resources conference of the Advisory Committee and INCODEL and to discuss the small watershed projects in the Delaware River Basin under Public Law 566.

SLIDE 2 - List: Flood control, etc.

The Department of Agriculture like the Corps of Engineers is concerned with flood control and flood prevention; water supply for agriculture including irrigation; municipal and industrial supply; water quality control; sediment prevention; recreation; and fish and wildlife development and conservation.

SLIDE 3 - Picture of good land management

Agriculture is an extensive user of land but a relatively small user of water in the humid regions. However, what is done on the land of watersheds has great influence on the behavior and management of water, not only on fields, farms, and woodlands, but in creeks, tributaries, and main streams. Improved land use and good land management and conservation are essential to river basin programs.

SLIDE 4 - Water damage (artist's sketch)

A lesson which conservationists learned early in their work with the land is that water is no respecter of property boundaries, whether farms, counties, or states. Watersheds are natural units of land and water management, and the Delaware River Basin is a combination of small watersheds.

SLIDE 5 - Picture of sediment damage

Of prime importance to sediment reduction -- a serious problem in parts of the basin -- and to the development and conservation of the water resources in the basin is work which soil conservation districts are doing.

SLIDE 6 - Circle graph of district activities

This work is basic to all projects being contemplated and needs to be speeded up. All but 4 of the 27 counties in the basin are soil conservation districts.

SLIDE 7 - Picture of small structure

The Department of Agriculture directs its attention to problems and needs of the watersheds that can be met by small structures.

The recently completed Delaware River Basin survey report serves as a guide for development of water resources in this area. In addition to the 11 major water control reservoirs for multiple-purpose development and the 8 major water control reservoirs for recreation, which later will include water supply, the plan for the basin consists of -

SLIDE 8 - Map of 39 reservoirs

39 small watershed flood prevention reservoirs, all of which can be built under existing programs. Several of these reservoirs are now being considered for inclusion in watershed projects which are in the planning stage.

SLIDE 9 - Picture of good land management

The plan also includes related supplemental programs for controlled use of the flood plains, land and land cover management, conservation of ground and surface waters, preservation and enhancement of recreation, enhancement of fishing and hunting resources, and preservation and improvement of water qualities. These are all involved, to some extent, in the programs of small watershed projects.

SLIDE 10 - Map of 254 reservoir sites

There are an additional 254 small reservoir sites in the watersheds of the basin which have potential for multiple-use. These may be included in the work plans as local interests proceed with the small watershed work. In fact, at the present time several reservoirs in this category are being considered in the work plans of some of the latest watershed projects.

SLIDE 11 - Map of watershed projects

The report recognizes the importance of existing and future small watershed projects and recommends this work be expedited. Small watershed projects currently in the planning or operations stages are the Brandywine, Little Schuylkill, Greene-Dreher, Lackawaxen, Brodhead, Pocono, Mauch Chunk, Wissahickon, Kaercher, and Mill Creeks in Pennsylvania, and Town Bank and Paulins Kill in New Jersey (all shown on this map). The projects which have completed work plans contain 54 small dams primarily for flood prevention, but with recreation, wildlife, and water supply benefits involved in some of them. As additional work plans are completed, this number of dams will increase substantially.

Not shown on the map are several other projects in New Jersey. They are: Silver Lake-Locust Island, Pine Mount-Mill Creek, and tributaries of the Morris River cove. These are quite small projects in the bay area of the lower Delaware and involve channel and dike work, mostly completed. The Assunpink Creek, which enters the Delaware River at Trenton, is a new project area of 60,000 acres and is just now in the beginning of the planning stage. It appears that a considerable number of small reservoirs will be needed for local flood protection in this area.

In the Paulins Kill project in New Jersey two small reservoirs have been completed for flood prevention and one remains to be built. In addition to this, the project involves some channel improvement.

The Town Bank project in the same state is a small one of 2,500 acres and involves about 5 miles of improved channel which has been completed.

In Pennsylvania, the Little Schuylkill project, an area of about 167 square miles, is in the operations stage. Here, the prime problem is flood prevention. Four small dams are planned; one of which is constructed. Two soil conservation districts and county boards of commissioners are the local sponsors.

The Lackawaxen tributaries project involves 7 reservoirs for flood prevention, 5 of which have been built. One dam will be built in 1962 and the final one in 1963. These 7 reservoirs will store 1,100 acre-feet of floodwater and cost approximately $270,000 and the land treatment in this upstream area will cost in the neighborhood of $160,000.

The Brodhead Creek watershed project, at the request of the local people, has currently been limited to the area above Canadansis. This plan involves 4 reservoirs costing over one-half million dollars. They will store over 4,100 acre-feet of floodwater and provide approximately 17 acres of permanent pool area.

SLIDE 12 - Recreation picture

One of the reservoirs is being designed to include recreation water and will have a pool of 11 acres. The work plan is pending Congressional approval at this time.

In the Greene-Dreher watershed, where the streams are swift and hard to manage, a total of 16 dams will be required to control runoff in this 46,000-acre area. Two of them will provide additional water for recreational purposes.

A flood prevention plan is feasible in the Wissahickon watershed. Local interests are, at this time, determining how to assume their responsibilities.

In the Pocono Creek watershed, as soon as local interests can discharge their responsibilities for projects already under way, it is expected that they will move ahead on this project.

The Kaercher Creek plan is about complete. It provides two single-purpose flood prevention reservoirs and one multiple-purpose reservoir, including a permanent pool of 50 surface acres with fish and wildlife features. This plan will give excellent flood protection to the town of Hamburg.

Planning was just recently begun in the Mauch Chunk watershed and is expected to be completed in 1962.

SLIDE 13 - Map of Brandywine

The plan for the Brandywine Creek area, under Public Law 566, is a good example of multiple-purpose uses in a small watershed project. It includes a system of 12 reservoirs to provide for flood prevention; water supply; recreation; and fish and wildlife benefits. Planning is complete, and local interests are working out their part of the cost sharing. Local sponsors are the Chester County Soil Conservation District; Chester and Delaware County Boards of Commissioners; the Delaware State Soil Conservation Commission; and the Brandywine Valley Association. They have been assisted by the Soil Conservation Service and the Forest Service of the U. S. Department of Agriculture; the Pennsylvania Department of Forests and Waters; and the Pennsylvania Fish Commission.

SLIDE 14 - Map of the basin

Effective water management in the Delaware River Basin begins with thorough conservation treatment of watershed lands and control of runoff water through upstream structures. Management of the water resources will result in storing, or saving, water when there is "too much"

SLIDE 15 - Newspaper headlines

for times when there is "too little". The small watershed act offers opportunity for comprehensive conservation action. The plan for the Delaware River Basin contemplates its wise and maximum use.

Thank you.

THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

TOCKS ISLAND NATIONAL RECREATIONAL AREA

Allen T. Edmunds,
Chief, Division of Recreational Planning
Region V, National Park Service,
U. S. Department of Interior

September 20, 1961

THE PROPOSED TOCKS ISLAND NATIONAL RECREATION AREA

by Allen T. Edmunds, Regional Chief
Division of Recreation Resource Planning
Region Five Office, National Park Service

It is a real pleasure to be here today and participate in the Annual Conference of this organization.

In an article I read recently it was stated that Americans like their leisure lively. One can scarcely doubt that statement and particularly so after scanning the newspaper following a holiday weekend. The carnage reported as a result of following our insatiable quest to "go somewhere and do something", once a holiday presents itself, is familiar to us all.

But to those of us who live in the Delaware Valley there is a very pleasant possibility to look forward to. We hope that in the not too distant future there will be within a short two-hour drive one of the great recreation areas of the East, thus lessening the possibility of risking life and limb in seeking recreational pursuits at greater distances in unfamiliar lands. And if we wish to have our leisure lively once we arrive, there will be full opportunity to do just that.

The proposed Tocks Island project, is as you know, the key project in the Corps of Engineers' plan of development for the water resources of the Delaware Basin. It is likewise a key project in the recreation plan. You are familiar with its magnitude and potential significance, its scenic and recreation values, the importance of the 12,000 acre lake for water-related recreation uses, the suitability of the surrounding lands for a wide range of uses and facility development. The area has broad regional significance, interstate character, and will satisfy a great need for a non-urban area in close proximity to a large portion of this Nation's population.

The establishment of the Tocks Island Recreation Area would accomplish in the park and recreation field three primary objectives: (1) Pre-

serve and conserve the natural resources of the area; (2) Preserve the historical and archeological features of the region; and, (3) provide unusual amd ideal opportunities for recreation to more people than is offered in any other similar area in the United States.

From the unique and widely known Delaware Water Gap, the heavily wooded Kittatiny Mountains form the eastern boundary of the area and are primarily in their natural state having resisted the scars brought about by the progress of man. It is essential that as much as possible of this natural state must be maintained to protect and preserve this picturesque mountain range.

Unfortunately, there is a possibility that the face of the mountain may be scarred by the developments in connection with the pump storage project. For the most part, this project will be out of sight except for the hardiest of hikers. However, it is imperative that the intake aqueduct which will carry water from the Delaware River to the top of the mountain be constructed in such a manner that the natural grace and dignity of this mountain will not be disfigured.

To the west are the foothills of the popular Pocono Mountains which contain numerous tumbling mountain streams with unusual waterfalls, outstanding rock formations such as The Cliffs south of Milford and deeply eroded gorges with virgin stands of trees. All of these need the same protective measures if their natural beauty is to be maintained.

The 12,000 plus acres of water to be impounded by the Corps of Engineers' multi-purpose structure provides the source for a wide range of water related activities. However, there are certain requirements which must be maintained to realize the maximum potential of this project. Number one of these requirements is that drawdown should be within the limits where fluctuation would not adversely affect recreation use. Number two is water

quality. This is most important for recreation, and quality control is a far reaching undertaking that should have the cooperation and interest of the residents and industries of the Upper Delaware River Basin. At present, the quality is excellent but I could think of nothing so distasteful and wasted, as 12,000 acres of polluted water in this beautiful setting.

In addition to the outstanding natural resources of the Tocks Island area, the region is rich in Indian history, Indian-settler relationship and the early efforts of commercial trading. The area was "Delaware Country", more particularly, the habitat of the Minsi Branch of the Delaware Indians, who at one time were equal to the mighty Iroquis. Many of the geographic names in the area reflect the passing of Indians. Mount Tammany on the New Jersey shore was named for Tamanend, great Chief of the Delaware Minisink Island which was then a stronghold of the Minsi Tribe. The word "Minisink" which means "water is gone" perhaps had reference to the Water Gap itself. There are four aspects of this general area relative to Indian-settler relationship which are noteworthy: namely, (1) The Walking Purchase of 1737; (2) the frontier trouble of the 1750's; (3) the Moravian Missionary activities of 1740-1760; and (4) the Sullivan expedition of the Revolutionary War Period which was prompted by the Wyoming Massacre. There are many other historical facts pertaining to the region which are too numerous to mention such as the early copper mining and the resulting old mine road, the early timber industry and the great log rafts. All these aspects add to the uniqueness and desirability of the Tocks Island area and should be preserved and perpetuated to provide recreation opportunities for the visitors of the future.

It is envisioned that the Tock's Island Recreation Area when completely developed would provide recreation opportunities for an estimated 154,000 visitors at any one time. The recreation facilities would provide

the opportunity to swim (and it is estimated that about 3 million square feet of beach space will be required) or to picnic in an estimated ten acres which would accommodate about 10,000 picnic tables and the opportunity for tent and trailer camping (preliminary plans call for about 2,000 sites). In addition there is planned 30 group camps that would accommodate 120 campers and staff per camp. Also there is planned a large number of boat docks and ramps for the ever increasing interest in boating. But we hope that Tock's Island would afford the visitor the opportunity, as so aptly defined by Webster, "for the refreshment of the soul and the mind"; a form of deviation from the normal every day routine. The fact that 75% of the land proposed for inclusion in the area is forested enhances its value for peaceful and meditative recreation.

To realize all these opportunities requires not only the work of the professional planners, the cooperation of state and local governmental agencies and the endorsement of organizations and associations such as this, but requires most of all the grass root support of the public. I have attempted to point out, in part, some of the conservation and protective measures that need to be considered and acted upon. However, even this is only the beginning. I know that many persons have talked about this project for years but little real planning has ever been accomplished.

You have all read, I am sure, of the authorization of the Cape Cod National Seashore in Massachusetts. This proposal had been a hot topic of conversation for the people of the Cape since 1955, yet little was done by the Lower Cape Towns to meet this situation until the Act was passed and signed by the President last August 7th. Only now has Barnstable County employed a planning agency to make a land use study of the County with special emphasis on the six Town primarily effected by the authorization of the National Seashore.

One can drive from the center of Boston to the Sagamore Bridge that empties on to the Cape in one hour and 15 minutes. The National Seashore will be easily accessible to the millions of persons along the East coast living within one day's drive to the area. What I am saying is this: we, of the Delaware Valley, are a lot closer in time and distance to a tremendous influx of the travelling public, than we realize. It is later than we think.

We must begin right now to plan for this proposal. First, effective measures must be taken to stop the encroachment of uses that are not compatible with the proposed development plan. Second, adequate zoning should be undertaken so that real estate cost will not become prohibitive. It is pointed out in our report that considerable costs could be eliminated if villages and town within the proposed area would accept zoning regulations. Third, the advantages to be gained, economically and physically, from the establishment of the Tock's Island Recreation Area should be studied and the facts made available to those living in the Delaware Basin.

We who are here today, along with all others living in the Basin, are responsible for what we do or fail to do. Only confusion results from lack of responsibility. The time is now.

THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

BARRIERS FOR DEVELOPMENT OF WATER SUPPLIES IN REGIONS BORDERING ON TIDAL ESTUARIES

General Norman Lack, Vice Chairman,
Delaware River Basin Advisory Committee

September 20, 1961

BARRIERS FOR DEVELOPMENT OF WATER SUPPLIES IN REGIONS BORDERING ON TIDAL ESTUARIES

General Norman M. Lack, Vice Chairman
Delaware River Basin Advisory Committee

I am pleased to talk to you for a very short time about some of the findings resulting from my studies of salt water barriers in tidal estuaries.

First of all, I want to say that I am employed by a very small office in Wilmington, Delaware which is part of the Water Research Foundation. My salary and my office are paid for by one man, so it is not a State matter nor a federal matter. I am not a salesman for any of the products which I want to talk about today. By the same token, I am not a Research Engineer. It is simply that I am trying desperately to find new ways of building things for water storage, water recreation and water facilities as cheaply as possible for our future generations.

I don't want to dwell on the figures that General Lipscomb and Col. Setliffe have told you about, but I think we in this room all know the figures that have come from the Kerr Committee. The National demand for water will double by 1980 and triple by the year 2010. I am more interested in the fact that recently, the Department of Commerce has released figures showing their estimation that in the next 20 years the federal and state governments will be required to spend 200 billion dollars. Now, that's a lot of money. If my feeble efforts for the Research Foundation can reduce that cost even a fraction, that is really our desire.

As you know, great strides have been made by the Office of Saline Waters. They have frankly admitted that they have reduced the cost of desalted water from $4 a thousand gallons to $1 a thousand gallons. Recently they have suggested to Congress that they would like to have 178 million dollars within the next four years. It hasn't been all roses with this Office, they have had their troubles. Quite recently, their big plant

in Freeport had to be closed down because 1700 carbon steel plugs became corroded and Congress and the House of Representatives had passed appropriations for only 50 million dollars. Congress has thus said there will be no more new plants for a while, at least not until further research is conducted. Now, that's the national situation.

Selfishly, I am looking at my little State of Delaware. As you know, we are a long, narrow state. We are primarily a "well water" state. We have only one stream of any size and, unfortunately for Delaware, 7/8 of that stream valley is in another state. We are a little bit worried in Delaware, at least I am, but perhaps I am a little bit of an alarmist. Across the northern part of Delaware, we have the C and D canal which my good friends, the Army Engineers, are going to deepen. This may or may not affect our wells below the canal but, unfortunately, 89 6/10 per cent of Delaware is below the canal. If you stand on a bridge on the canal and look south, you are looking at virtually an island, entirely surrounded by salt water. That island lives on water from wells, so it may not be too far in the future that we will require a great deal more fresh water from outside sources. The Army Engineers plan has suggested, as alternates to the Delaware River barrier, (1) long pipe lines from the Delaware River in Pennsylvania which have a staggering cost tagged probably as much as $200 million, and (2) pipelines from the Susquehanna River at a cost up to $170 million. All these things frighten our little State because our annual budget is only 83 million dollars a year, so I am afraid we would have to be living in sin for a few years to pay for it.

The salt water barrier in the Delaware River was a crazy idea perhaps, but the Army Engineers in their report have said that it is entirely feasible to build. It could effectively stop the salt water intrusion and it would create a huge reservoir; but from the realistic standpoint, the people of

Philadelphia don't want their ships stopped. Therefore, the barrier project is not practical at this time. I honestly believe, not in my lifetime, but someday, the Port of Philadelphia will ask that the barrier be built because, as you know, the salinity is rising steadily in all of the eastern rivers. Selfishly, I am thinking of the future generations of lower Delaware. It is now a case of dollars versus diapers, and the dollars won.

Looking ahead and trying to find out where we could get large quantities of water -- half a billion gallons for Delaware in the next 20 or 30 years -- I have to go across people's back yards and, with apologies to General Lipscomb, because I am in his back yard as well as the state of Maryland's, I am using the Susquehanna tidal flats as an example.

As you all know the Susquehanna River is the largest river in Eastern United States excepting the St. Lawrence River. It has approximately 30 thousand square miles below Conowingo Dam. By comparison, the Delaware River Basin is 12,700 square miles, the Hudson Basin is 14,000 and the Potomac is between 10,000 and 12,000 square miles. The Susquehanna flows into the Chesapeake Bay at the rate of approximately 23 1/2 billion gallons a day and has been doing so on an average for the past 23 years. Compare that to approximately 1 billion gallons a day for New York City and its five boroughs. There is an awful lot of water going to waste.

There are very few barrier dams in the world today. There is one in Hawaii, one in Los Angeles, one in East Pittsburgh, Pennsylvania and there are four others in construction now. In the later part of October, three more are going to be open. These dams range in height from 5 feet to 14 feet. There is one dam that is supposed to be 18 feet. Of course, we'll never ever build a Grand Coule Dam with this kind of material in the Susquehanna, but below the tidal estuary, I would like to submit my theory for your consideration.

Now this dam would simply consist of a small concrete pad which would certainly have to have a foundation. The length of this pad would be approximately 30 to 32 feet. Across this pad, would be a row of one inch bolts sunk down into the concrete approximately 15 to 18 inches and sticking up about 3 or 4 inches on to which this special material would be fastened. It forms a large bag. When it is deflated it lies perfectly flat. As it fills with water it swells up and forms a dam. This will dam water up for 20 or 30 miles.

This dam is made of material which I am going to pass around for your inspection. I shall tell you all I know about it.

One can jump on the Los Angeles dam, and I think (one could) almost drive a light truck across it. The dam in Los Angeles has been in existence now for four years. It was first thought that it would last only 10 years. It has been since reexamined and studied and it is now found that it may last 21 years. The manufacturer has since developed new material which it claims will increase the life of this dam to 30 years. Above all, this dam works, and works well.

The material weighs about one pound per square foot. It is made of nylon and neoprene and is acid resistant. The approximate cost to put the dam in place, with all the pipe fittings and everything, not including the foundation, would be about $25 to $27 a square foot. Now, as I say, I am not a salesman and I'm not trying to sell anything. I'm only trying to examine something new for you and me for the future.

The dam at Turkey Point would be 9 feet high for a length of 11,000 feet and 14 feet high for about 4,000 feet. It would cost roughly 3 1/2 to 4 million dollars, not counting the foundation. You would probably have to double the figure to get the whole cost. You could collapse the dam in case of flood in about 12 minutes. You would not need any electric power to do so.

You might have a storm, or enemy action, or some other need for simply letting the valve out and depressing that dam flat to give 155 thousand square feet of opening which would be exactly what it is right now without the dam. If you take 155 thousand square feet at a water velocity of about 4 1/2 feet a second, which is not an unusual velocity for a flood, this dam would take care of the largest flood which I have been able to find on record in the Susquehanna Valley.

Incidentally, we have recently found a great deal of interest in this sort of dam in Sunbury, Pennsylvania. This would be an example of a specific use of this type of dam with the sort of material other than for a salt water barrier. It has been found that a dam near Sunbury, when installed, would increase the length of the boating area from 1/2 mile to 12 miles. We are still working on this particular application.

May I conclude by saying that I do feel that this barrier situation on a low, broad estuary is something that has to be studied, not only in the Susquehanna, but someday in the Delaware. There are other places, too. I just want to advance this idea of desalting a long, wide estuary where you don't have to buy a lot of land or displace a lot of people. You can use the same water, you can clean it up, you can make a fixed shore line for recreational purposes where the people can have homes and cottages.

I submit then, for your consideration, that a barrier dam, and the resultant reservoir at Turkey Point on the Susquehanna River, could supply the State of Delaware, both ends, with adequate water, not to the year 1980 or 2010, but for the next 500 years.

Here is one tidal estuary that could supply the City of Washington, the City of Baltimore, the State of Delaware and Southern New Jersey with adequate water for the next 500 years. It could all be done by one barrier dam at Turkey Point on the Susquehanna River.

I have with me in the corner of this room a model of the proposed Turkey Point project which I shall be pleased to demonstrate at the close of the formal part of this morning's session.

* * *

THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

INTERSTATE FEDERAL COMPACT FOR DELAWARE RIVER BASIN

John P. Robin, Chairman,
Delaware River Basin Advisory Committee
presented by Walter M. Phillips

September 20, 1961

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INTERSTATE FEDERAL COMPACT FOR DELAWARE RIVER BASIN

by Walter M. Phillips
Executive Secretary
Delaware River Basin Advisory Committee

We of the Delaware River Basin Advisory Committee are glad that this year we are able to tell you more about the compact and, perhaps a little bit about the situation that existed last year when we were frankly embarrassed due to our inability to tell you more about our negotiations. At that time, we were tied up in negotiations. The Advisory Committee was meeting while the Incodel Conference was progressing. We have a very delicate situation. There was even some doubt that the compact would ever materialize. It was so delicate that we frankly just could not discuss it at that time.

But all that has passed. As you may know, on the first of February, 1961, the Governors and Mayors approved the draft of legislation. Only last Saturday, the new Delaware River Basin compact passed the Congress of the United States. It's a wonderful story, should someone ever care to write it.

I know that most of you are very much concerned with the substantive contents of the compact. That will be covered in another session of the conference. I think I should tell you about the reservations made by Congress in enacting the legislation. The reservations are not serious and there are no problems created by them, but some reservations were made. These were permitted under section 1.4 of the Compact which authorizes the Congress to withdraw from the compact at any time it wants to, or specify any conditions it cares to as to its participation in the compact.

You realize of course that this is the first time that the federal government has ever participated as an equal partner in an agency which is also a state agency. In other words, you have an agency here which is given both state powers and federal powers, and this one agency will exercise those

powers. Although state and federal governments have cooperated in highways, housing, water resources and so forth, never before have they together bestowed their powers on a single agency. This is a unique thing, so the Federal Government approached the whole subject very cautiously. Our draftsman, Bill Miller, provided section 1.4 so as to protect us against any constitutionality problems. He felt that it was necessary that the Congress should have the right to withdraw at any time and by the same token to place any conditions upon their participation that were considered necessary. After long negotiations with Secretary Udall's people in Washington, (Secretary Udall was designated by the President to meet with the basin spokesmen) 21 reservations were to be made by the Federal Government, of which 20 were accepted by the representatives of the basin.

These reservations were of a very simple nature for the most part. They dealt with federal functions; protecting them to a degree. There were two major problems, one was that the federal government first wanted to have veto power over everything that the new commission did. The other one was a question of how hydroelectric power ought to be dealt with.

I shall review these 21 reservations quickly for you.

The first one had to do with navigation and water withdrawal charges. The Federal Government provided that, "no provision of section 3.7 shall be deemed to authorize the Commission to impose any charge for water withdrawals or diversions from the Basin if such withdrawals or diversions could lawfully have been made without charge on the effective date of the compact; or to impose any charges with respect to commercial navigation within the basin". This reservation met some of the objections that had been raised in the Pennsylvania legislature. They did not alter the original intent of the compact; merely added clarification.

The next reservation was that in case of a national emergency, the President should not be restrained by the compact in any action he might need to take.

The third one was that the member of the Commission appointed by the President should serve at the pleasure of the President instead of for a term coinciding with the President's own term. This is a minor kind of thing.

Next, it was desired that no expenditure of federal funds under the compact should be outside the regular budgetary process of the federal government. Nobody could object to that reservation.

Fourth, the Federal Government expressed fear that bonds that might be issued by the Commission could be unchangeably tax exempt, whereas the federal government now has the right to make municipal and state bonds at any time subject to federal taxation. The federal government simply prescribed that the commission bonds should fall in the same category as state and municipal bonds on that score.

The next one was that nothing should be in the compact which might obligate the Congress to pay any interest or principal bonds issued by the Commission. We had thought this protection was already in the draft of the compact.

There was a provision in the compact pledging the technical services of all the agencies of the members, the members being the governments of the four states and the federal government. Here the Congress, by the next reservation, withheld a little bit. It said that the commission may only draw on the technical services of the federal agencies to the extent that those agencies agree to render such services or as directed to do so by the President himself.

The next was a technical reservation, namely that the prevailing wages as prescribed by the Davis-Bacin Act should be paid by the Commission and also that the Walsh-Healy Public Contracts Act should apply. The latter has to do with wages paid by sub-contractors and with other labor conditions.

Next was that nothing in the compact should limit the authority of the Department of Health, Education and Welfare in regard to matters of pollution. However, the reservation goes on to say that nothing in this reservation should be construed to prevent the new basin commission from setting even higher standards than the United States if it wants to.

The next reservation has to do with section 8.4 of the compact empowering the commission to adopt regulations in the granting of concessions. The Federal Government said that it didn't want the commission to regulate concessions in a Federal Park or something of that kind. They thus reserved the right of the federal government to be exempt from such regulations.

Next, the Federal Government held out the agency from being covered by the Federal Court Claims Act, the Tucker Act, and the Administrative Procedures Act. These things apply strictly to federal agencies and not to interstate-federal agencies. In addition, it was also provided that the employees of the new commission should not be entitled to the benefits of the federal service. However, these features could be adopted by a later act of Congress if desirable, but not because of this compact would the Commission employees be considered to be federal employees.

The next reservation was that nothing in the compact should be considered to enlarge the authority of any federal agency other than the commission.

It might be noted that these latter reservations are merely clarifications of position.

Perhaps more pointed is the next reservation in which it is set forth that the United States District Courts should have original jurisdiction in all cases or controversies arising under the compact. Well, that is something of a clarification. We felt that was the way it would actually have worked under the drafting of the original act.

Next, the right to alter, amend, or repeal this act was hereby expressly reserved. The Federal Government has had that right anyway, as may be seen in section 1.4 of the compact.

Another section provides that the member of the commission appointed by the President could be paid and could receive compensation from the federal government and, likewise, his alternate to be appointed by the member could be compensated. (The compact provides that the governors themselves shall be members as well as one appointee of the President of the United States. Each member, then is privileged to appoint an alternate on the supposition that the governor is too busy to decide on more than major policy questions and that the alternates should follow up on a lot of the administrative and detailed matters.)

The next reservation provides that nothing in the compact "shall impair or affect the constitutional authority of the United States or any of its powers, rights, functions, or jurisdiction under other existing or future legislation in and over the area or waters which are the subject of the compact including projects of the Commission: Provided, that whenever a comprehensive plan, or any part or revision thereof, has been adopted with the concurrence of the member appointed by the President, the exercise of any powers conferred by law on any officer, agency or instrumentality of the United States with regard to water and related land resources of the Delaware River Basin shall not substantially conflict with any such portion of such comprehensive plan and the provisions of Section 3.8 and Article 11 of the

Compact shall be applicable to the extent necessary to avoid such substantial conflict".

This reservation further provides, however, that the President may suspend the plan at any time by issuing an executive order and setting forth his reasons, findings and determinations. This reservation is what came out of the request by the federal people to have a veto over whatever the Commission might do. What this language means is that the federal government member can exempt, can hold out, the federal government from being bound by the plan. There will still be a plan and the states can go ahead and adopt it by majority vote (practically everything the commission does is by majority vote), but if the federal government member wants to hold out he can, or he can hold out as to one particular aspect or provision of the plan. He can then later concur and it becomes binding, but his non-concurrence or later concurrence must be by affirmative action. In other words, he is presumed to have concurred in the plan, unless within 60 days of its adoption he files a notice that he does not concur. That puts the burden on him to act if he chooses not to concur. If he has concurred, it is then binding for six years. The six year period ties in with the six year program of improvements which the commission is supposed to prepare, selecting certain projects of the comprehensive plan and saying these jobs are the ones which should be done in the six year period ahead. At the end of the six year period, the federal member is entitled to file a non-concurrence to something he earlier had agreed to, so that just because he agrees once, the federal government is not tied forever to what one member may concur in during his particular term. Six years after the adoption of the plan, the federal member has a sixty day period in which he can file a non-concurrence to any aspect of that plan.

There was one other important reservation that we didn't think was a problem. The federal government felt that if section 1.4 should ever be

held unconstitutional -- that is the provision that allows the federal government to withdraw at any time by action of the Congress -- then federal participation should cease to the extent that the President should deem appropriate. In other words, the President could, under the circumstances, withdraw the federal government if he should so elect, or he could have the federal government continue as a part of it either in full or on some partial basis.

The hydro-electric power question was resolved by the Congress, which left that subject as treated in the body of the compact. In other words, Congress did not make any reservations on the subject of power, despite all of the discussion of the subject.

The final provision amends all acts inconsistent with the compact.

That's the story as far as time will permit me to tell it now.

* * *

THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

THE 1961 FEDERAL WATER POLLUTION CONTROL ACT

Sylvan C. Martin,
Regional Engineer
Region II - U. S. Public Health Service

September 20, 1961

THE 1961 AMENDMENTS TO THE FEDERAL WATER POLLUTION CONTROL ACT*

by

Sylvan C. Martin
Associate Director for Environmental Health Services
United States Public Health Service

On July 20, 1961 the President signed P.L. 87-88, the Federal Water Pollution Control Act Amendments of 1961. In view of the limited time, I shall assume that you are familiar with the previous Federal Water Pollution Control Act, P.L. 84-660 and, accordingly, confine most of my remarks to the amendments adopted last summer.

The new Water Pollution Control Act Amendments retained all of the sections of the old act and did not add any new ones. These sections are as follows: (1) A Declaration of Policy, (2) Comprehensive Programs for Water Pollution Control, (3) Interstate Cooperation and Uniform Laws, (4) Research, Investigations, Training, and Information, (5) Grants for Water Pollution Control Programs, (6) Grants for Construction of Sewage Treatment Works, (7) Provision for a Presidentially appointed Water Pollution Control Advisory Board, (8) Enforcement Measures Against Pollution of Interstate and Navigable waters, (9) Cooperation to Control Pollution from Federal installations, (10) Administration, (11) Definitions, (12) Limitation of the Act on other authority, (13) Separability, and (14) Short Title.

Section I continues the Congressional policy of recognizing, preserving, and protecting the primary responsibilities and rights of the States in the control of Water Pollution. It also continues Federal support of and provision for technical services and financial aid to State and Interstate Water Pollution Control agencies and to municipalities.

The amendments to this section of the act now bring the Water Pollution Control Program directly under the Secretary of Health, Education, and Welfare. After the President signed the amended act, Secretary Ribicoff issued a statement authorizing the Surgeon General to administer this activity and to exercise substantially the same responsibilities as were vested in him prior to the 1961 Amendments. He stated, however, that there is no question but that the expanded and strengthened provisions of the law will be carried out in a vigorous and effective manner. The Secretary further appointed a Departmental Task Force to study "the status of the Water Pollution Control Program and 'to furnish him' as soon as possible, recommendations as to the need for administrative changes or legislative action to assure that this program is given the recognition and status necessary to carry out its mission."

The mandate for the preparation or development of comprehensive programs for eliminating or reducing the pollution of interstate waters and tributaries thereof and for improving the sanitary condition of surface and ground waters was not amended. However, to this section of the law was added an important responsibility.

The new amendment requires that:

(1) "In the survey or planning of any reservoir by the Corps of Engineers, Bureau of Reclamation, or other Federal agency, consideration shall be given to inclusion of storage for regulation of streamflow for the purpose of water quality control, except that any such storage and water releases shall not be provided as a substitute for adequate treatment or other methods of controlling waste at the source.

(2) "The need for and the value of storage for this purpose shall be determined by these agencies, with the advice of the Secretary (DHEW), and his views on these matters shall be set forth in any report or presentation to the Congress proposing authorization or construction of any reservoir including such storage.

(3) "The value of such storage shall be taken into account in determining the economic value of the entire project of which it is a part, and costs shall be allocated to the purpose of water quality control in a manner which will insure that all project purposes share equitably in the benefits of multiple-purpose construction.

(4) "Costs of water quality control features incorporated in any Federal reservoir or other impoundment under the provisions of the Act shall be determined and the beneficiaries identified, and if the benefits are widespread or national in scope, the costs of such features shall be nonreimbursable."

This new provision of the law provides additional legal basis for utilizing the benefits of low flow augmentation in the control of pollution and the improvement of water quality. As pollution loads to our streams mount and as the present maximum attainable degree of waste treatment is approached in more and more locations, this new provision of the Act may be the only way in which minimum standards of water quality, to say nothing of desirable levels, can be maintained.

There were no changes in the section dealing with interstate cooperation and uniform laws.

The section of the old Act dealing with research, investigations, training and information was continued unamended except for the elimination of the limiting $100,000 annual appropriation authorization for the provision of research fellowships. However, to this section of the Act were added three additional responsibilities which clearly indicate the concern of Congress with the increasing criticality of the water pollution picture.

The first added responsibility was for the development and demonstration under various conditions of:

a) practical means of treating municipal sewage and other water borne waste, to remove the maximum possible amount of physical, chemical, and biological pollutants in order to restore and maintain the maximum amount of the nation's water at a quality suitable for repeated use;

b) improved methods and procedures to identify and measure the effects of pollutants on water uses, including those pollutants created by new technological developments;

c) methods and procedures for evaluating the effects on water quality and water uses of augmented stream-flows to control water pollution not susceptible to other means of abatement.

To carry out these added responsibilities appropriation authorization for not more than $5 million for any fiscal year was provided, with the total sum appropriated for such purposes limited to $25 million.

The second added responsibility was for the establishment and maintenance of field laboratory and research facilities. At least seven such facilities were specified, one of which is to be located in the

northeastern area of the United States, one in the middle Atlantic area, one in the southeastern area, one in the midwestern area, one in the southwestern area, one in the Pacific northwest, and one in the state of Alaska. Insofar as practical, each such facility shall be located near an institution of higher learning in which graduate training and research can be carried out.

The third added responsibility is for the conduct of research, development work, and studies with respect to the quality of the waters of the Great Lakes, including an analysis of the present and projected future water quality of the Great Lakes under varying conditions of waste treatment and disposal, an evaluation of the water quality need of those to be served by such waters, an evaluation of municipal, industrial, and vessel waste treatment and disposal practices with respect to such waters, and a study of alternate means of solving water pollution problem (including additional waste treatment measures) with respect to such waters.

The section of the Act concerning grants for State and Interstate water pollution control agency programs was amended to increase the present $3 million authorized level to $5 million each year, until and including the fiscal year ending June 30, 1968. The allocation formula and the requirements for the submission and approval of an annual pollution control plan by the agency concerned were continued. To this section, however, was added the requirement that starting July 1, 1962 the State plans shall set forth criteria used by the State in determining priority of projects approved by the State for construction grants.

Most of the public interest in the Federal Water Pollution Control Act during the past several years has centered on the section dealing with grants for construction of sewage treatment facilities. The 1961 Amendments

continue the provision that projects must be approved by the appropriate State water pollution control agency and by the Secretary of Health, Education, and Welfare. The amount to be granted to any one project has been increased from 30% of the estimated reasonable cost or $250,000, to 30% of the estimated cost or $600,000, whichever is the less.

In the case of multiple-municipal projects, the Secretary on such basis as he determines to be reasonable and equitable may allocate to each municipality to be served by such a project its share of the estimated reasonable cost of such a project, and shall then apply the Federal Grant limitation to each such share as if it were a separate project to determine a maximum amount of any grant. The maximum combined grant for these multiple-municipal projects is $2,400,000.

Further, the Act provides that no grant should be made for any project in an amount exceeding $250,000, until a grant has been made for each $250,000 project or less for which a true application was filed with the State Water Pollution Control Agency before July 20, 1962. A true application is construed as one meeting all State and Federal requirements and which is sufficiently complete to permit the Public Health Service to make a bonafide grant offer. In view of these restrictions, for the current fiscal year and up to July 20, 1962 no grant in excess of $250,000 will be made for an individual project. Multiple-municipal projects are still permitted during this period.

The Act also substantially increase the total appropriation authorization for Construction Grants. You will recall that the present maximum appropriation authorization is $50,000,000 per year. Under the amendment $80,000,000 are authorized for fiscal year ending June 30, 1962, $90,000,000

for 1963, and $100,000,000 for the fiscal years ending June 30, 1954, through 1967. The requirement of the old Act that at least 50% of the funds appropriated for each fiscal year must be used for grants for treatment works serving municipalities of 125,000 population or under, is continued.

A new aspect of the Construction Grants Program is the provision that sums allotted to a State which are not obligated within six months following the end of the fiscal year for which they were allotted, because of a lack of projects which had been approved by the State Water Pollution Control Agency and certified as entitled to priority, shall be reallotted on such basis as the Secretary of Health, Education, and Welfare determines to be reasonable and equitable to States having projects approved for which grants have not been made because of lack of funds. There is one qualification on this procedure, however. When a State has funds subject to reallocation and the Secretary finds that the need for a project in a community in such State is due in part to any Federal institution or Federal construction activity, he may, prior to such reallocation, make an additional grant with respect to such a project which will in his judgement reflect an equitable contribution for the need caused by such a Federal institution or activity. Funds made available to States by the reallocation provision are in addition to any funds otherwise available to such State under the Act.

The Construction Grant Program was further amended by the requirement that the provisions of the Davis-Bacon Act must be complied with by projects receiving Federal funds. This means that all laborers and mechanics employed by contractors or subcontractors on projects for which Federal grants are made, must be paid wages at rates not less than those prevailing for the same type of work on similar construction in the immediate locality.

Section 8 of the Act deals with Federal Enforcement. Under the amended Act, Federal enforcement action against pollution has been extended from interstate waters to navigable waters in or adjacent to any State or States. It does not matter whether the discharges causing or contributing to such pollution go directly into such waters or reach them after discharge into a tributary. Federal enforcement action over navigable waters of intrastate character, however, are carefully limited by the new amendments.

Under the following situations Federal enforcement action must be initiated by the Secretary:

a) when pollution of waters which is endangering the health or welfare of persons of a state other than that in which the discharge or discharges originates is involved, (interstate pollution), the Secretary must give formal notification thereof to the water pollution control agencies concerned and promptly call a conference of such agencies if requested to do so by the Governor of any State, or by a State Water Pollution Control Agency, or by the governing body of any municipality whose request is concurred in by the Governor and the State Water Pollution Control Agency for the State in which the municipality is situated.

b) When, on the basis of reports, surveys, or studies, the Secretary of Health, Education, and Welfare has reason to believe that pollution endangering the health or welfare of persons in a State other than that in which the discharge or discharges originate (interstate pollution), is occurring.

c) Whenever requested by the Governor of any State, the Secretary shall, if such request refers to pollution of interstate or navigable waters which is endangering the health or welfare of persons only in the requesting state in which the discharge or discharges originate (intra-state pollution), give formal notification to the water pollution control agency or interstate agency of such State, and shall promptly call a conference of such agencies unless, in his judgement, the effect of such pollution on the legitimate uses of the waters is not of sufficient significance to warrant exercise of Federal jurisdiction under this section.

Thus, under the new provisions of the Act the Secretary may take enforcement action against pollution endangering the health or welfare of persons in the State in which the discharge or discharges originate (intra-state pollution), only at the request of the Governor of the State concerned. However, the final step in Federal court action, the enforcement procedure, can be taken only upon written consent of the Governor.

The Secretary must give the agencies involved at least three weeks prior notice of the conference. After the conference a summary is forwarded to the Conferees which includes:

a) The occurrence of pollution of interstate or navigable waters subject to abatement,

b) The adequacy of measures taken towards abatement, and

c) The nature of delays being encountered.

At the conference an attempt is made to develop a schedule for remedial action acceptable to the Conferees. If the Secretary believes that effective progress is not being made and that health and welfare is being endangered he recommends to the appropriate State agency that it take the necessary remedial action.

The Secretary allows at least six months for the initiation of this remedial action. At the conclusion of this period, if no such action has been taken which, in the Secretary's opinion, is reasonably calculated to secure abatement, the Secretary calls a public hearing. For this hearing a board of 5 or more persons is appointed by the Secretary. Each State in which the discharge is occurring and each State affected selects one member of the hearing board and one member must be a representative of the Department of Commerce.

Three weeks prior notice of the hearing is given to the agencies concerned. If the hearing board finds that such pollution is occurring, it makes recommendations to the Secretary concerning the measures it finds to be reasonable and equitable to secure abatement. The Secretary sends the findings of the hearing board and the recommendations to the person or persons causing the pollution with a notice specifying a reasonable time, not less than six months to secure abatement. He also sends these notices to the State and interstate agencies concerned. If action then does not take place in a reasonable time, the Secretary may request the Attorney General to bring suit on behalf of the United States to secure the abatement of this pollution. In the case of intra-state pollution of navigable waters, the consent of the Governor of the State involved must be obtained in writing before the Secretary may request the Attorney General to bring this suit.

Section 9 on Cooperation to Control Pollution from Federal Installations was amended by the addition of a provision which requires that in his summary of any conference pursuant to Section 8 of the Act, the Secretary shall include references to any discharges from any Federal property which allegedly contribute to the pollution under discussion. Further, any notice of a hearing pursuant to the enforcement section, Section 8, shall also be given to the Federal agency having jurisdiction over the discharges involved and the findings and recommendations of the hearing board shall also include references to any such discharges which are contributing to the pollution found by the hearing board. This places Federal installations in the same position as municipal or industrial polluters involved in Federal enforcement action.

These then are the 1961 amendments of the Federal Water Pollution Control Act. In summary, they place the responsibility for the Federal water pollution control program under the Secretary of Health, Education, and Welfare rather than the Surgeon General; they provided for the means of including in Federal agency reservoir construction programs storage capacity to make possible regulation of stream flow for the purposes of water quality control; they provide for broader research and study responsibilities; they authorize the establishment of at least seven new research centers; the Program and Construction Grant authorizations were increased and extended until June 30, 1968 and June 30, 1967 respectively; and Federal enforcement authority was extended to include abatement of intra-state pollution of navigable waters when requested by the Governor of the State concerned.

All in all these amendments constitute a rather extensive overhaul of the Federal Water Pollution Control Act, and it will be sometime before

their full impact can be properly assessed and evaluated. We now have had two major revisions of this Federal law within a 5 year period, at both the State and Federal levels, and I am sure that nearly all of the program people concerned, are hoping there will now be a period of relative stability in the legislative mandate so that the changes necessitated by the amendments may be evaluated, initiated, and perfected.

THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

CURRENT STATUS OF WATER SUPILY ACT OF 1958

Brigadier General T. H. Lipscomb,
North Atlantic Division Engineer
U. S. Army Engineers

September 20, 1961

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Remarks by Brigadier General T. H. Lipscomb, Division Engineer, North Atlantic Division, at Meeting of the Interstate Commission on the Delaware River Basin and the Delaware River Basin Advisory Committee, Pocono Manor, Pennsylvania, September 20, 1961.

Mr. Kerney, distinguished guests, ladies and gentlemen:

I am happy to have been invited to be here and talk to you on the current status of the Water Supply Act of 1958. This was an important step forward in federal planning for use of our water resources. Although the Act - in Section 301a - declared it to be the policy of the Congress to recognize the primary responsibilities of the states and other interests in developing water supply for domestic, municipal, industrial and other purposes, it also recognized that the federal government should participate and cooperate with states and local interests in developing such water supply in connection with the construction of federal navigation, flood control, irrigation or multiple-purpose projects. It not only provided in any reservoir projects constructed by the Corps of Engineers or the Bureau of Reclamation to impound water that storage may be included for present or anticipated future municipal and industrial water needs, but also set forth principles for the evaluation, cost-sharing, and repayment procedures required. These latter provisions were amended slightly by the Federal Water Pollution Control Act Amendments of 1961, and I will describe them as they exist after amendment.

First, the Act permits federal agencies to include water supply benefits in their comparison of over-all benefit with over-all costs in order to determine the economic feasibility of a project as a basis for recommendations to Congress.

Second, it provides that in allocating the cost of a multiple-purpose project, to the different purposes served, the cost allocated to water supply should be determined on the basis that water supply will share equitably in the benefits derived from development for multiple purposes.

Third, it provides that before construction of a project including water supply provisions for a present demand is initiated, state or local interests shall agree to pay for the cost of provisions for water supply for the current demand.

Fourth, it recognizes that it will be necessary, also, to provide for future water supply. It permits not to exceed 30 per cent of the total estimated cost of any project to be allocated to anticipated future demands where state or local interests give reasonable assurances and there is reasonable evidence that such demands for the use of such storage will be made within a period of time which will permit paying out these costs during the life of the project.

Fifth, it provides that the cost of water supply necessary to provide for either present or future demands shall be paid with interest within the life of the project, but in no event shall the period of payment exceed 50 years after the project is first used for storage of water for the purposes served.

Sixth, no payment is required to be made with respect to storage for future water supply until the supply is first used and during a period of up to ten years no interest will be charged on cost of provision for future water supply. Interest rate is determined as being based on the average interest rate of long-term Treasury Department public obligations, which amounts at the present time to about 2-5/8th per cent.

The overall effect of these provisions would appear to make participation in a multi-purpose water storage project materially more attractive to most local interests than the alternative of separate construction of a single-purpose reservoir. Interest rates provided are minimal; capital cost is reduced by participation in the benefits of multi-purpose development; the 50 year amortization period is generally materially longer than what is normally used in retirement of bonded indebetadness by local interests; and the 10-year interest free period for obligations for providing future water supply represents another distinct saving, since it is impractical from an engineering point of view for most municipalities to build their water supply in annual increments to meet present demands, so that building for the future is essential even when financed by the conventional bonding methods.

The attractive features provided by the Water Supply Act of 1958 for multi-purpose development as compared with single-purpose development, should not lead us to conclude that arranging for the required cooperation from the state or local governments is necessarily a simple matter. In the case of a single municipality served by a single reservoir, it could be quite simple. However, with longer rivers, larger population and industrial centers, and larger reservoirs, from which stored water when released may be re-used two to four times in several different counties cities and states, the problem becomes far more complex. The basic service rendered by the federal government in the water supply feature of the project, is in providing storage space in the reservoir and operating the reservoir in such a manner as to meet the water supply requirement. On some

occasions the intake for the water supply system may be in a federal reservoir, and in some cases, the conduits for conveyance to the user may be constructed by the federal government. In the more common case though, and the one which faces us principally in the Delaware, the federal service is completed when the required water is released into the natural stream bed. Although each user might well be willing to pay if he were the only user, under circumstances which actually exist he is apt to be quite concerned as to whether or not other users are getting a free ride and whether or not there is any possibility of his payments being reduced. The equitable distribution of the cost of the services of providing the storage and release of water affects not only the cost to each user, but if improperly done may adversely affect the population and industrial growth of some areas as compared with others afforded more favorable rates.

The problem of who can be charged for withdrawals made possible by the storage and release of water is further complicated by the differences in state laws governing rights to withdrawal of the flow of a stream bed and as to definition of what is natural flow and what is artificially augmented flow. Also, these laws affect the important factor, from the point of view of the purchaser, as to whether he is sure to receive the benefits of the storage and release which he paid for, or whether someone else may have the privilege of intercepting and adversely using that flow.

The provisions of the Water Supply Act of 1958 as amended in 1961 have been applied by the Board of Engineers for Rivers & Harbors in the case of one important report in which water supply is an important feature - this was a review report on the North Branch Potomac River, Maryland and West Virginia. The board

recommended the construction of a reservoir in the vicinity of Bloomington, Md., for flood control, water supply, water quality control, and recreation, at an estimated cost of about $51 million for construction and $200,000 annually for maintenance and operation. The cost allocated to water supply on the basis of initial requirements was about $3 million, or about 6 per cent of the construction cost, which must be paid with interest during the first 50 years after storage is available for this purpose. Cost allocated to water supply on the basis of future requirements was about $14 million or about 27 per cent of the construction cost. Interest on this $14 million begins 10 years after storage is first available for low flow augmentation, and final payment to be made 50 years thereafter. Local interests will also have to furnish assurances of their intent to control pollution of the streams subject to low flow augmentation by adequate treatment or other methods of controlling waste at their source. The net cost to the U. S. is about $34 million out of $51 million; local interests bearing the remainder of the cost.

Approximately 35 per cent of the benefits of this project are from water supply and of that about 7 per cent are future water supply benefits for downstream areas, primarily in the Washington metropolitan area. About 6 per cent represent water supply benefits initially in the North Branch area and about 22 per cent North Branch benefits which will accrue in the North Branch at some future date. These total water supply benefits accrue in 3 states, plus the District of Columbia, and at the present time there is no organization of local interest which has the legal and financial capacity to contract to pay the cost allocated to local interests.

It, therefore, appears as though the project, if authorized, will have to await either some form or organization of local interests which will have the necessary legal and financial capacities, or else the development by the federal government of a series of contracts with municipalities, states, and industrial corporations, which when taken together will provide the over-all local contribution. Although the preceding speaker has covered the 1961 Federal Water Pollution Control Act, I think it is of some interest to this audience to know that the cost of water quality control allocated in this particular project represented 42 per cent of the total cost, with about half being initial and about half being future. The major proportion of the water quality control benefits occur in the upper stream area where there are serious problems of pollution due to acid mine wastes and also pollution due to lignins resulting from paper manufacture which cannot be removed by any practicable process. Some of the pollution abatement benefits occur down stream in the Washington metropolitan area. Before the Federal Water Pollution Control Act Amendments of 1961 provided for non-reimbursability of water quality control features determined to have wide-spread benefits, the local contribution on this project was about 75 per cent of total cost. This illustrates clearly the significance of that feature of the Act.

No doubt some of you who have studied the Delaware River Report of the Philadelphia District may wonder why there are no water quality control benefits evidenced in the allocation of costs in the Delaware study as compared with the Potomac River study. These differences were carefully analyzed at the time the reports

were being drafted and arise from the differences in the hydrologic characteristics of the stream and in the distribution of population and industry along them. The Delaware River is a favorable stream from a point of view of water quality control, with a high rate of fall, sand and gravel beds which provide natural purification, and comparativ ely even distribution of pollution resulting from the population and industry from Port Jervis on down to Philadelphia. At the present time, the river is not seriously polluted except in the area between Philadelphia and Wilmington, and the tidal flow in this area is of such magnitude that comparatively little benefits would be derived from any practical increase in flow which could be provided by additional storage. The Delaware River also has a comparatively even rate of flow, considering the minimum natural low flow as compared with the average annual flow. On the Potomac River the population and industry are concentrated in the Washington metropolitan area to a great extent and not so well distributed. In addition, the low flow as compared to the average annual flow is less favorable, resulting in more stagnant condition during dry periods. These and other factors contribute to a situation where there is no alternative to substantial augmentation of the low flows for water quality control purposes.

In conclusion, I would like to point out again that the provisions of the Water Supply Act of 1958 as amended provide a very favorable program of allocation of cost and repayments which would tend to favor the development of multi-purpose projects as being more economical than single-purpose projects for water supply purposes only. The major problems arise in compliance with the terms of the Act which call for local cooperation. The alterna-

tives in large basins such as your own are for extensive federal contracting with many agencies with a view to making sum total of contracts which add up to the requirements of local cooperation as determined by Congressional policy, or alternatively the formation of some form of local organization, such as the proposed Delaware Basin Commission, which can provide the assurances required by the federal government and, through some processes consistent with state and local law and practices, devise the means of collecting the funds necessary for this purpose.

END

THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

PROPOSED WATER RESOURCES PLANNING ACT OF 1961

Mitchell Wendell, Esq., Consultant,
New York State Joint Legislative Committee on Interstate Cooperation

September 20, 1961

PROPOSED FEDERAL WATER RESOURCES PLANNING ACT OF 1961

By Mitchell Wendell, Esq.,
Consultant, New York State
Joint Legislative Committee on Interstate Cooperation

I always get a great deal of pleasure out of these annual meetings for two reasons. In the first place, the meetings held by Incodel every year are among the most important in terms of their substance for those of us who are interested in water resources and also in the general field of intergovernmental relations. The other reason is a more personal one. It gives us all a chance to get together and to be with, for a day or two, a number of people who are indeed most congenial.

This year the meetings are particularly important in view of the developments in respect to the Delaware River Compact. It is indeed a most remarkable achievement that within a single year the legislatures of all four Basin states have adopted the compact and Congress too has, for the first time, enacted the Compact which will provide for it being a full participant. I understand that it is a reasonably good assumption, and certainly I hope it is, that within a week, President Kennedy will sign the bill which will then complete the action necessary to assure the establishment of the Interstate-Federal Compact Commission.

I would like to talk to you about the present Administration's water bill that goes by two numbers since they are companion introductions: In the Senate, Senator Anderson's bill S. 2246 and, in the House of Representatives, Congressman Aspinall's bill H. R. 8177. I would like to talk about those companion bills from two points of view which are, I believe, rather closely related for an audience such as this. One point of view is that of those of us who are concerned with the effective state, regional and local participation, not only in routine water administration, but also in the actual making of water policy. The other aspect is perhaps a little more

closely connected with this particular group; that is, the possible affect of the provisions of this legislation, should these bills be enacted, on a venture such as the new Delaware Compact.

The Administration water bills are actually very broad in scope. They cover sufficient subject matter so that an analysis in anything like complete form could well occupy this entire afternoon session, if not longer. Since we have considerably less time than that, I know you will understand that the treatment I give them here will dwell heavily on those elements of the legislation most directly relevant to the exploration of the two points of view that I have mentioned.

For the most part, I will follow the chronological sequence established in the bills themselves. I will, in certain particulars, depart from that arrangement where I believe that the analyses of the subsequent provisions involved may perhaps be a little clearer by taking things at least partially out of turn.

The legislation has a preamble, or declaration of policy; it then has four titles. The first of them is concerned with the establishment of a Federal Water Council. The second title is concerned with the means for the creation of Federal River Basin Commissions. The third title is concerned with a new proposed grant-in-aid program for state water planning. The fourth title has a series of miscellany in it of which only one section, section 405, will receive any consideration from me here this afternoon.

Suppose we begin with Title I. Title I would establish a Federal Water Council. This Water Council would be an inter-agency committee really; but with somewhat more extensive functions, or at least somewhat sharper functions, than the inter-agency committees of which we are familiar in several parts of the United States. The four members of the Federal Water Council would be the Secretaries of the Departments of Interior, Agriculture,

Defense (becuase, of course, of the Army Engineers) and Health, Education and Welfare.

This Federal Water Council would have two duties, of which I wish to mention at the moment only one. The duty that particularly concerns me is that to study, determine and make recommendations concerning the necessities for quantities and qualities of water in several regions of the United States. In other words, the Federal Water Council would have the task of attempting to determine how much water, of what kinds of quality, was needed in the various parts of the United States. Its planning functions then would include examination of ways and means of securing such quantities and qualities of water. The most interesting thing about this provision, I believe from our point of view, is that this activity, very broad and certainly important in scope, is a sort of activity which with relatively minor exceptions in Federal law and administration up to the present time, has been a principal concern of state agencies and, in a few instances where interstate agencies exist, of interstate agencies as well. Certainly this is a function that the sponsors of the Interstate-Federal Delaware Compact have had very much in mind as a function for the new Compact agency. Under these bills, the Federal Water Council would have this responsibility. There is no attempt made in the legislation as it now stands to deliniate the responsibility of the Federal Water Council in this respect, as against the responsibility as traditionally carried on by state and to a much more limited extent by Interstate agencies.

In the present state of the legislation, I do not think it an unfair interpretation of this particular Title of the bills to say that this is a flat responsibility conferred upon the Water Council without any indication that it may perhaps be exercised elsewhere as well.

Title II of the proposed legislation of the Administration's Water Bill would provide machinery for the creation of federal commissions for

conceivably all the river basins throughout the United States, although it might not go that far. The nature of these possible federal basin commissions is quite important. The scope of their possible activities as put forth in the act is also quite important and, the manner of their possible creation and organization, I believe, for us is especially important.

There are a number of you in this room who are familiar to some extent, or perhaps quite extensively, with the two temporary study commissions which have been created by separate acts of Congress in the past couple of years. One is the Study Commission for the Texas River Basin, the other is a similar study commission for the Southeastern Region of the United States. Those of you who are familiar with these two arrangements may be assisted in this discussion to get your bearings if I say that Title II of the Administration Bill provides for federal commissions that would be very closely patterned after the Texas and Southeast Commissions. The principal difference is that where those two commissions are presumed to be temporary and to go out of existence when they make their reports, the commissions under Title II of the Administration's Bill would not be temporary. They could be terminated at any time by action of the President of the United States, but there is no specific duration for them. They could well be permanent organizations and my understanding is that they are certainly intended to be long range organizations if not permanent ones. Indeed they could hardly discharge the type of planning function assigned to them if they were not intended to be either long range or permanent organizations.

Now let us consider what these commissions are supposed to do. They are conceived in the legislation as agencies for comprehensive planning. I don't know that much more need be said. I would certainly remind you that the organization to be established under the new Delaware Compact is designed to be an organization to do comprehensive planning.

The bills provide that each commission shall have a chairman appointed by the President, who presumably would be a full time officer, and, in addition to the chairman, each of the federal departments or agencies having substantial interest in the subject matter that the commissions were to concern themselves with, would also have representatives. Title II does not say how many federal representatives this would involve. I think, however, that there are some things that seem reasonably clear on this basis. I would presume that certainly all four of the agencies which would be represented on the Federal Water Council created by Title I ought to qualify in this connection and, in fact, I think it probably, if not entirely, certain that there would be at least seven such federal agencies. The reason why I picked the figure of seven is that the inter-agency committees in our various river basins throughout the country have such representation from seven agencies: The Department of Defense, Department of Interior, United States Public Health Service, Department of Agriculture -- those being the four on the proposed federal water council -- and in addition, the Departments of Labor and of Commerce and the Federal Power Commission. This makes the total of seven agencies which have been regularly deemed important enough to have representation on inter-agency basin committees in various parts of the country. I would assume, although I must emphasize that the legislation does not in this respect specifically say so, that you would have at least seven federal representatives plus a federal chairman which would make a total of eight. In addition, the bills provide that each state in an affected basin would have one or more representatives as the President might determine. The exact number is not indicated. In the case of the Texas and Southeast Study Commission, that number is one for each affected state. Then it is further provided that, at the discretion of the President, if the president decided that an interstate agency with jurisdiction in the area should be

represented, then there could be representation from such an interstate agency, but this is in a somewhat different category because the legislation does not make it clear whether there would or would not be such representation. This would be up to presidential decision.

Now what does all of this mean? It means, basically, that each such commission, at least in terms of numbers of persons on it and presumably of vote, if it came to a matter of voting on commission policies, would undoubtedly have a very large federal agency majority. The size of the state representation is not known. It would vary undoubtedly with the size of the basin, and the number of states that might happen to be in it. Were such a commission set up for the Delaware Basin, for example, and if the President decided to limit the representation from the states to one each, we would have a commission consisting of eight federal representatives and four state representatives.

Now, what exactly is it that the procedure provides with respect to the choice of these representatives? Actually, the President of the United States is to choose them all, including the state representatives. The reason that I say that, although the provision is a little involved, is that the bill would provide, if enacted in its present form, that the governors would be given an opportunity to nominate possible state members of such a river basin commission, but the President would determine whom he was going to choose. He could accept the governor's nominee if he wished, or he could choose somebody else. If the governor were not sufficiently interested in the whole commission to submit a suggestion to the President, the President could then proceed to select that state's representative for himself. Now this is a rather peculiar arrangement, especially when contrasted with what goes on in the Interstate Compact for the Delaware. I had previously thought, as a student of American Government, that if somebody represents

me, and if he continues to represent me, then I ought to have the power to remove him. This is not the arrangement that is here provided. If I may be pardoned for the allusion, I would think that what is here proposed is something much more like what goes on for example in France in local government where the Prefect, who is the principal local official in that country, is chosen by the Ministry of the Interior and is actually the National Representative to the local area over which he presides, rather than the representative of that local area. I would venture the opinion that the arrangement in the Interstate-Federal Compact for the Delaware and the arrangement in the similar, although much narrower in scope, compact for the New England states, would provide for much more in the way of actual representation of the states. In both instances, the states themselves, in accordance with their own laws, choose the members of the combined bodies which are to represent them.

Now, how does such a general planning commission for water and related resources in a basin come into being? There are two ways provided in the proposed Administration Bill. First of all, the governor of any single state in an affected basin could suggest to the President that he establish such a commission. On the suggestion of any single governor the president could then proceed to establish a federal commission for that particular basin.

I may be somewhat unfair if I choose for example the Mississippi River Basin as a possible illustration because obviously this is one of the largest we have. Of all of the some dozen states that are within the Mississippi Basin, this would mean that the governor of one could be the precipitating cause for the establishment of such a commission, even if the governors of the other states were uninterested, or,in fact, opposed.

To apply the formula to the Delaware Basin, you have perhaps a somewhat more typical situation, but one which I believe is still disturbing enough. The governor of any one state, for example the State of Pennsylvania, could trigger the machinery for the establishment by the President of a federal commission for the Delaware Basin, even if the governors of the other three Basin states were opposed to the idea. For that matter, as the bill now stands, even if the Interstate-Federal Compact Agency with substantially similar powers were in existence, and the governor of one state decided that it would be good to have a Federal Commission too, it could be created. Perhaps it could conceivably happen if one of the states became temporarily dissatisfied with how things were going under the compact and decided it was really going to fix the machinery of the compact by setting up this alternative means of making policy. The other means for the creation of such a commission is on recommendation of the Federal Water Council itself which is entirely a federal group consisting of the four departments of the Federal Government that I enumerated without any state representation at all.

These are the ways in which we could have a federal commission with very much the same power as individual state or interstate agencies or with at least many of the powers the proposed interstate-federal compact on the Delaware would have. I would suggest that all of us who are interested in state and intergovernmental water affairs generally, and certainly all of us who are interested in the progress of the now-about-to-be-born Delaware Compact, should ponder very carefully, the effect, or the possible effect, of a proposal such as this on what we have labored so long to produce by way of intergovernmental cooperation.

Now with respect to Title III of the legislation, I warned you I would skip over and take somewhat out of turn certain of its features. Actually

I am going to spend less time on Title III than on any of the others, so suppose I leave it until last.

Title IV of the legislation is interesting to us for only one provision contained in it; that is, section 405 of the bills. This provision is a savings clause which recites that no activities or jurisdiction of any agency of the federal government shall be affected by this act. This, too, is a very interesting provision in an act the proponents of which have advanced so very largely because of its presumed effectiveness in coordinating water developments throughout the country and presumably in the separate regions of this country. I am frankly somewhat at a loss to know how you could possibly coordinate water activities in any region of the country if you specifically, by provision of the act, exempted all activities of federal agencies from the coordination that presumably the act would otherwise help or might otherwise help to secure.

I think this particular provision in section 405 of the act is to be contrasted with the principal item in Title III which I believe is of concern to us. Title III of the act is a new grant-in-aid proposal. The Federal Grant-in-aid would be for comprehensive state water planning. There is presently no provision in Title III at all for grants-in-aid to regional or interstate agencies which are, or may in the future, become concerned with comprehensive planning. But, for individual state planning agencies there is a proposal for a new grant-in-aid program provided that the planning to be assisted with the federal money is comprehensive in nature. There are set forth in Title III criteria in accordance with which it would be determined whether or not state plans could be approved as being sufficiently comprehensive and within the meaning of the act.

Most of those criteria are rather standard and those of you who are familiar with grant-in-aid programs in any field will have no trouble at all recognizing old friends. One of the criteria, the very first one set forth in the list of Title III, is that there must be sufficient provision, in the view of the granting federal body, to provide for the coordination of the state planning with, among other things, the planning of federal agencies. This is what I would like to contrast for you, with what is in section 405 of the same act which I mentioned a little while ago.

The act contains both disclamour of any applicability of the act to the planning or other activities of all the federal agencies. On the other hand, the act, at least with respect to qualification for a grant-in-aid assistance under Title III, would require that the state plan submitted must provide for coordination of the state planning activities with the activities of the federal agencies.

The other item within the grant-in-aid provisions in Title III that would be of interest to you for completeness is that the second duty of the Federal Water Council that I mentioned at the very beginning would be to administer this new grant-in-aid program. In other words, the Federal Water Council established by Title I would be the administering agency.

I think you can well appreciate from the way I have handled the various provisions of this legislation that, at least in my view, there are very serious questions which arise along the line with respect to this particular legislation.

In conclusion, I would merely like to point out a number of things that I believe to be directly relevant in this Administration proposal with respect to the interstate-federal compact on the Delaware and any such similar arrangement that might be attempted in other parts of the country.

Over the past several years, representatives of the Washington side of the federal agencies, had exhibited a considerable amount of what Walter Phillips this morning called caution with respect to the new proposals for interstate federal coordination such as embodied in the Delaware Compact. For that matter, Secretary Udall, in describing the Delaware Compact somewhat affectionately, I hope, as an "oddball" type of an arrangement, made it quite clear that he does not wish it implied by any means that the approval of this compact in the Delaware should set a precedent. From all of this, I think it is quite fair to conclude that there are strong sentiments in Washington and, the fact that this is an Administration proposal about which I talked to you, that the Delaware Compact, during the first several years of its coming existence, is going to be very much on trial and that there may well be attempts made to substitute some other type of arrangement for it, especially should the administration proposal succeed in navigating through Congress in anything like its present form.

Now I also want to make something else quite clear with respect to the views of the federal government as I understand it. I have noticed within the last several years in much of the work I have done and with respect to many of the federal officials I have met and had the pleasure to work with from time to time, a rather marked difference -- and I must say this very frankly even though perhaps some people would caution against saying it -- between the attitude in some Washington places toward the type of coordination we are trying to achieve and the attitude to be found in some of the same agencies at the same regional level.

I like to think that this may itself be a testimonial to the value of having local and regional policy power to determine, rather than simply regional and local routine administration, in progress. I like to think that

perhaps the people in the field, whether they come from the federal agencies or from the state agencies, perhaps are a little in advance of the central government in Washington in appreciating the desirability of the state and regional flexibility and in appreciating the type of coordination of federal, interstate, local and state activity and water resource planning for which the Delaware Compact stands. I am very much afraid that in its present form, the administration proposal raises many dangers to this particular type of coordination. I would hope that on a reappraisal and a reexamination of this approach before it goes much further, some of these may be reconsidered and may be pointed out. What we do here in the Delaware Basin and, in fact, the very opportunity that we may have to do it, will of course not only depend on the views of the states but also on the active and considerate participation of the federal government. I can well understand that in a new concept, such as that embodied in the Delaware Compact, there can be caution in the Federal level. Perhaps a measure of caution is desirable in any new venture especially one having the scope of the Delaware Compact. I hope, however, that it will be a friendly caution.

If I have somewhat overbalanced my discussion and analysis of the Administration Water Bill with some rather pointed and extensive comments on the Delaware Compact itself, I hope that you will understand that the reason why I have done it is that this particular legislation, at this particular moment, does have a relation to the theme which must obviously this year be so central to an Incodel meeting.

If there is an opportunity in the general discussion which follows, I will be very glad to the best of my ability to answer such questions which you may raise.

* * *

THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

THE DELAWARE RIVER BASIN PROGRAM

John P. Robin, Chairman
Delaware River Basin Advisory Committee

September 21, 1961

THE DELAWARE RIVER BASIN PROGRAM

By John P. Robin, Chairman
Delaware River Basin Advisory Committee

You may remember that a year ago I was here at the Incodel Annual Meeting and at that time, for once in my life, I was mute and as silent as a clam regarding the Delaware River Basin Compact negotiations.

I now happily find myself able to be as chattery as a magpie, because, in this intervening year, in fact in only seven months of this year, the compact has been completed, submitted to the legislatures, ratified by the legislatures and passed in the Congress. It is now on the President's desk and with his signature, it will become the law of the land; an unprecedented piece of legislation accomplished in an unprecedented short time.

Time has been of great essence in the adoption of this compact. The book on this subject says that it takes seven years to pass a compact, not seven months. This, of course could only happen in so short a time because the stars were in their courses. There were 25 years of preparatory work and the fact that the idea and the times came into focus, one with the other. It has been said that no power in the world has so massive a force as that of an idea whose time has come. I think we could say that the idea of comprehensive planning for the Delaware Basin finally came and crystalized. It did so because very many devoted men and women throughout the four states and in the federal government determined that we could no longer continue as in the past. The time had come for us all to join together and to solve our problems and to do productively the things which we have the power to do.

There were 40 meetings of the Delaware River Basin Advisory Committee during the forming period, as well as innumerable conferences. There were, before we were finished, seven drafts of the compact. Finally, however, we did come up with a document that has stood the test of the examinations which so many legislative bodies and so many departments of government

have given to it. I am quite sure that had there been any bugs in this Compact or if it had any substantial holes, or had it not been ready to stand the test, it couldn't have come through this trial by legislative fiat as it has and come through so well.

As I have said previously, last year at this time I was as silent as a clam. The reason for that was that we were in the depths of negotiations and when you are in negotiations of this sort, you obviously cannot take your troubles to the public. If you do so, your positions become frozen. It becomes impossible to understand different points of view and to create the compromises that are the basis of all legislation in a democratic country. We found that because we had people of determination and people of good will in the four states, the two cities and in the federal establishment, all those problems could eventually be resolved.

I want to tell you a little bit now of the inside story of the creation of the Compact, of the times when it appeared that we wouldn't have a compact at all, of what our problems were and what the philosophy was that we exercised in trying to reach solutions.

Let me say first that it was only two years ago that the Delaware River Basin Advisory Commission was given the job of writing the compact. Our first and most critical decision was to get a draftsman of high quality. We were very fortunate to obtain Bill Miller as our legal draftsman. He is a man who understands the problems of government and can express them legally. I think, without any doubt, had we not had his talents in legislation, his talent in comprehension and understanding government and reflecting points of view finally in terms of legislation, we could not have succeeded.

Two other critical decisions were reached, one of them novel and one of them precautionary. The novel decision was to have the governors serve on the compact body in their own person. This had never been proposed nor

done before to my knowledge; and it answered many critical questions. For instance, it solved the question of the number of representatives that should be on the commission, and, the old problem of how to make a commission responsible to the citizens. This is solved, of course, by having elected persons serve on the commission. This decision also put the full prestige of the governor's office in each of these states behind the compact. In addition, by having the governors on the commission, a centralization of state's viewpoints is forced. I believe this is going to be vital to us since the states, like the federal establishment, do not always speak with one voice. Most important, perhaps, by having the governors serve on the commission, a feeling was created, both in the states and in Washington, that this was something vitally important, so much so, that the governors themselves were ready to take service on the commission. The result was that we had that massive power of mastering public opinion and political opinion which only the governors of the Commonwealth of Pennsylvania and the other three states involved could give to us.

The second critical decision, a precautionary one, was to not give the compact agency the right to levy taxes, to raise funds by fiat, nor to levy user charges except where benefits were conferred. Perhaps under an ideal situation, if you were looking at this problem only, that right might make it an easier commission to operate, but I am quite sure that if we had proposed that right, we could not have had ratification in the states. Those two decisions were internally critical and, I think, in the eventual result, most important to us.

There was a very serious problem which was at its height when we were here last year which had to be solved. That was the problem of how could we reconcile, in this compact, the long standing problem and trouble between New York and Philadelphia -- between the diversionists and the

retentionists. We had deadlocked at the time we were here last and we honestly didn't know how we would ever solve it. The people in the lower basin states said we might solve it best by not mentioning it, just let the status quo be the status quo. The people of New York said no, if we are entering into a compact, we have to feel that we have gained something by our participation. One of the crucial incidents toward solving the problem was a meeting between Mayor Wagner and Governor Lawrence, during which each man gained the clear view that the other man really wanted a compact adopted and that, therefore, compromises could be discussed and perfected. We also had critical meetings in Philadelphia where we were able to convince our people that there was a benefit to Philadelphia in accepting a compromise solution on this critical and longstanding problem. The result was that we got a much better solution than if either of the alternative possibilities was accepted by the other. The discussions brought us a stronger compact because we now have a compact body which has the review powers for allocating water outside the basin and we have a very good situation in that New York City can now proceed, knowing that the lower basin states are committed not to attach legally their right to divert the 800 million gallons of water per day that the Supreme Court gave them. By the same token, the lower basin states are now assured of the releases that the Supreme Court insisted that New York must give as compensation. This was a case where conflict really resulted in improvement.

Finally, after having surmounted all of these decisions and crises, we were able to write a compact. I feel that we owe a special debt of gratitude to the principal water resources officers of the four Basin States, Commissioner Wilm of New York, Commissioner Bontempo of New Jersey, Secretary Goddard of Pennsylvania and General Lack of Delaware, if this compact is successful for the next 100 years. I am sure that if these unusually able and selfless men had not had a spirit of preferring interstate cooperation,

rather than marking out their private governmental domains, we could not have succeeded.

After the compact was published, we found we had another little crisis on our hands in the Pennsylvania legislature. We had used the word "tolls" in the compact. Tolls is a word that creates allergies in the minds of a great many people who are fearful that somehow it connotes shipping charges on the lower Delaware or the estuarial port. Consequently, we had many fearful people in the great businesses and corporations, whose cooperation we have always hoped to have. It took a long series of discussions in Harrisburg and in Washington to finally satisfy them that the compact commission did not intend to levy tolls on commerce as a means of financing its operation.

Another crisis arose during federal negotiations. We had made a cautious decision early in drafting the compact that we would do it between the states, rather than between the states and representatives of the federal government. We knew that was risky because obviously, nobody likes to be left out and nobody likes to be handed a document which somebody else has drawn up and be told to take it. You can understand why the federal people were surprised and not all together pleased when they saw a document that had been drafted by the four states alone without their participation. But we thought, and believe still, that our reasoning was good. First, it was hard enough getting an agreement among the states without having a fifth party as a part of the negotiations. We wnated to get a united front among the states. Secondly, last year was an election year. It would have been embarrassing to have negotiated with people who weren't there when you came to Washington with the completed compact. Consequently, we made a concrete

decision that we should negotiate the compact among ourselves, then go to Washington and, believing it to be good and in the national interests, try to convince our associates in Washington that it was good.

A very important thing that Bill Miller included in the compact was a provision that the federal government alone could establish reservations for its participation in the compact. We agreed that the states had to take it, as is, word for word. The federal government, however, due to its constitutional position, was given the privilege of adhering to the compact on such terms as it might prescribe, provided those terms did not substantially alter the compact. This provision provided us with a mechanism for negotiating a settlement, not only with the administrative department, but with the Congress.

We should not feel that the initial resistance to the compact in the federal government was in any way an indication that there is not a great desire in the federal agencies to do a maximum job of water resources development. We do not want to exaggerate a feeling that the federal government is on one side and the states on the other. The whole purpose of this compact is to put us on the same side and, to some degree, I am concerned when we have too much reiteration of federal control or states rights, or, whose job this is, or, whose job that is. It is all of our jobs. A compact has finally been developed so that there should be an entire participation by all the agencies of government, local, state and federal. Only thus will we get full development.

When the federal people first looked at this compact, they could see a lot of things that worried them. That is understandable. In the first place, the federally established departments are huge organizations with a strong belief in the rightness of what they are doing, and a strong sense of organization. They have many problems. For four states to come

to them and tell them to subordinate themselves to the states and to take one vote, while the states have four, was a shocking idea. Thus, at our first meeting with the Secretary of Interior and with the various representatives of the federal government, we did have a real crisis for the compact. However, just as in the New York - Philadelphia dispute, or as in the Pennsylvania - United States Steel question, or as in the other problems that came along, there were solutions which by patience, by keeping our head, by having good will on all sides, were quickly found. The federal people found that many of the things they feared were easily explained and satisfied. Some points they thought were important to them we were able to accept very readily. We were able to eliminate the idea that there should be a federal veto over the work of the commission. Obviously, we could not support that. The federal government needed assurance that the states would not become a block to prohibit federal action. We were able to solve that by the reservations we made on the operation of the comprehensive plan.

In my opinion, despite Secretary Udall's hard words on this compact, there is a general spirit in Washington of wanting to do very important things in the water resources field. I'm quite sure, as we gain experience, we will find a maximum and not a minimum of federal cooperation. As a result, I think we are going to have a very successful instrument.

We don't advocate the Delaware Basin compact as a model for the country. What we say is that it will be good for the Delaware. It might be good for other eastern rivers. We are not trying to impose it as a pattern and by the same token, we don't expect to have any other pattern imposed upon us.

In regard to federal water legislation, which is as yet undeveloped, I feel that when we finally do get such legislation, it will not interfere,

nor be competitive, with what we are proposing to do on the Delaware. We should not, therefore, fear any undermining of what we have accomplished in this compact.

We were very fortunate in having Congressman Walter of Pennsylvania, who is a very powerful and determined person, as well as Congressman, in support of the compact. His ability to get the compact through the House of Representatives while we were still negotiating with the federal government was vital.

We were also very happy and fortunate to have in the Senate of the United States two senators who had been the original founders of the Delaware River Basin Advisory Committee, Senator Clark of Pennsylvania and Senator Boggs of Delaware. They have been the people who began the Delaware River Basin Advisory Committee with the help of the other senators of the basin states. With those two men, preeminently, we were able to finally marshall all the problems in the senate that you could possibly think of to get rapid passage. I think all the men involved deserve a great deal of credit for what finally was achieved.

Now that we have the bill, or will have it in a week, what is going to happen? Well, the President will sign it. After thirty days following that signature, it becomes effective. We four states then are bound to each other irrevocably for the next 100 years. This is a marriage from which there can be no divorces.

The federal government is sort of a companion to the bride. It can come and go as it pleases, but it has chosen to come and I am sure it will stay with the compact.

One thing to remember about the federal enabling legislation which we have discussed is that it is not unchangeable. The federal reservations can be changed by succeeding sessions of congress, whereas the compact body

itself can only be changed by readoption in the four states and in the federal establishment. So if there is anything in the federal reservations which time indicates can best be cured, it will be a relatively simple matter to do so.

The commission, as I have said, will take from thirty days from the date of the President's signature. The President must then name a federal representative. We don't know at this time who that representative will be. The governors will be the representatives of their respective states and, in each case, they are privileged to, and instructed to, name an alternate if they so wish.

The Governor of Pennsylvania has made his decision public. He intends to appoint Secretary Goddard, Secretary of Forests and Waters. The governor of New York, I believe both by legislation and public announcement, has said that he would appoint Commissioner Wilm. I think it is a relatively open secret that the governor of New Jersey will name his conservation commissioner, H. Mat Adams and the governor of Delaware will name General Norman Lack. In a sense then, at least half of our Advisory Committee is just moving right over to become alternates on the Delaware Basin Commission. If we had thought we were having a funeral, it appears that the ghosts are raising quickly from the grave.

It is obvious that the new commission will have a job to do. Merely writing a law or creating an instrument of government does not solve anything. You merely begin a mechanism which you hope will work. We would expect that the commissioners will meet to organize in November or December of this year. They will then have the job of adopting their by-laws, electing their officers, settling the allocation of funds for operating costs between the states, establishing a meeting place and headquarters for the Basin Commission's operations, and beginning the mechanics of selecting an executive

director and such other staff as they may need to fulfill their purposes. When all these things have been done, obviously, the Commission will be in business.

I would expect that Incodel would be folded into the commission's work.

I would expect that the Advisory Committee will find itself liquidated on or before the time of the selection of an executive director by the commission. We originally felt that our job was done when we reported the compact to the governors last February. However, the governors felt that we should stay in being to act as a sort of coordinating body to secure adoption of the compact. I cannot see any possible reason for extending our life beyond the selection of an executive director who will then take all this burden from those of us who have been shouldering it in the past.

The first big job of the new commission, its key job, will be to develop a comprehensive plan. That will take time, even though there is a great deal to build upon. The comprehensive plan will be the governing document for all water resources development in the Delaware Basin. This is a planning commission with teeth. In other words they both publish a plan and they enforce the plan. Very few planning commissions are able to do that. Most of them are advisory. No project affecting the water resources of the Delaware Basin will be permitted to proceed in the Delaware Basin Area unless it conforms to the plan adopted by the Commission.

I do not think the commission will want to hold everything up until the formal action of plan adoption has taken place. Instead, I hope the commissioners will become an organizing body to expedite the things we all want, such as the authorization for Tocks Island and other specific reservoirs and projects that are now pending action in the basin.

I have found many people confused about the great many powers given to the basin agency, such as the power to issue revenue bonds, to do engineering, to actually execute projects. I think it will be many years, if ever, that the commission will be actually an executing body with its own engineering, its own construction and its own sources of revenue. It is much more likely to be a body which puts projects together; which arranges the allocation between the states and the federal government and between the municipalities within the states; which creates a package and then takes that package to the Congress and the legislatures. At that point, the established normal and constituted bodies, both in the states and in the federal government, will execute the projects.

The purpose of all of this is to develop the Delaware River so that it becomes an asset to the entire area which it serves. We have already found that what we propose here in the Delaware has created a great deal of interest in the Susquehanna Valley. There will be a strong effort made to create an advisory committee for the four states affected by the Susquehanna River; namely, Pennsylvania, New York, Delaware and Maryland, in order to conduct a major study of the Susquehanna Basin. To you who live in Pennsylvania, I would say that this is going to be a very important thing because the Susquehanna Valley is roughly the heart of Pennsylvania's depressed areas. I don't think we could get at that job a moment too soon. Of course we wanted to do one thing at a time. However, I think that our next step is westward to the Susquehanna and I would hope that the people of the Delaware Valley will give the same support to a planning program for the Susquehanna that the people in the Susquehanna Valley obviously gave to the Delaware plan. I hope this will be carried out very soon.

The Delaware Valley is probably the most intensely studied, organized, reorganized, and sometimes disorganized river basin or service

area that we have in the United States. We know a great deal about it. We have a body of accumulated knowledge in Incodel which is invaluable. The fellows on the Advisory Committee and their staff have learned much that is useful about the Delaware. We have the great advantage of the Army Engineers study, which is not only the Corps study, but the study of all the federal agencies and their coordinating and cooperating bodies within the states. We have a record of considerable accomplishment from which to build. Thanks to the work of Incodel and the work being done in the Schuylkill, thanks to the programs of all the states, pollution in the Delaware River and its tributaries has been reduced, they tell me by 50 per cent in 20 years. That is a great achievement! We have important flood control projects functioning on the Lehigh. We have the great port development in the estuary of the Delaware. This is a river which has had a good deal done to it. It is no longer a virgin river, it is a river which is being built upon, it has been hurt, and, at the same time, the damage is being repaired and new prospects are opening up to us. It was Abraham Lincoln, I think, who said when Grant captured Vicksburg, which was the last confederate outpost on the Mississippi, that the Father of Waters once again rolled unvexed to the sea. Well, it's our job to vex the Delaware. We are not going to let her roll unvexed to the sea. We are going to put dams on her, we are going to create new lakes and impoundments, we are going to use every gallon of water for its best use for human kind, we are going to create in this river valley an example for ourselves, for the nation and for the world, of what responsible government and responsible citizens can do with a resource which God gave us and create from it a maximum benefit to all mankind.

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THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

REGISTRATION LIST

THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

REGISTRATION LIST

Incodel Annual Meeting
Pocono Manor, Pennsylvania
September 19-22, 1961

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THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

A PUBLIC DISCUSSION ON PROPOSED ACTIVITIES AND PROGRAMS OF DELAWARE RIVER BASIN COMMISSION

Charles R. Bensinger, President
Water Resources Association, presiding

September 21, 1961

DELAWARE RIVER BASIN WATER RESOURCES CONFERENCE

Pocono Manor Inn, Pocono Manor, Penna.

Transcript of the

"Public Discussion"

of the powers and functions of
the Delaware River Basin Commission

September 21, 1961

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Mr. Walter Phillips called the meeting to order at 10:15 a.m., September 21, 1961. Mr. Phillips introduced the Chairman for the meeting, John P. Robin, Chairman of the Delaware River Basin Advisory Committee.

Mr. Robin presented the distinguished guests seated at the Head Table. They were as follows:

Colonel T. H. Setliffe, Army Corps of Engineers
Francis Pitkin, Chairman, INCODEL
Arthur Ford, President, N.Y.C. Board of Water Supply
Walter M. Phillips, Executive Secretary, DRBAC
John Thompson, A New York member of INCODEL
James Allen, Secretary-Treasurer, INCODEL
General Norman M. Lack, Vice Chairman, DRBAC

Mr. Robin - "The form of this meeting today is to take on the appearance of Court procedure. In such matters it is customary to have a Marshal....for him to call his witnesses and present his case. That function today goes to Charles Bensinger, president of the Water Resources Association. From now on this meeting is for Mr. Bensinger and the witnesses he will call."

Mr. Bensinger - "Good morning, everyone. My name is Charles R. Bensinger and I am President of the Water Resources Association of the Delaware River Basin. I have been given the assignment today of 'marshaling' this ' public discussion ' and may I say that I am both delighted and honored to do so.

"Those of you that attended last year's sessions of the annual INCODEL conference will vividly remember that the question on everyone's lips at that time was: Will we ever have a compact? Will a compact

for the Delaware ever be written? Frankly, I was among the skeptical that despaired that one ever would be written. My only comment now is: What a difference a year makes!

"The compact, of course, was written in final form late last year, submitted to the four Governors and two Mayors in February of this year and what has happened since February in the various legislative chambers is, of course, current history that we're all familiar with. My point, of course, is that in less than a year, and this I find fantastic, our concern has shifted from whether a compact would be written ---to an anaylsis of the contents of the compact --- to enactment of the compact ---and finally to the Delaware River Basin Commission itself. In short, today most of us want to know: What will the Commission do? And how will it do it?

"Both INCODEL and the Advisory Committee knew that this was a major public concern, but they also knew that it was highly unlikely that the new Commission would be organized by the time of their Annual Conference. Hence, since the new Commission wouldn't be available to answer the public's questions, the two organizations decided that the public should be given the opportunity of telling the new Commission, through an educational meeting and a complete transcript of that meeting, what they believed the Commission should do and how it should do it. Personally, in our representative democracy I think this is the correct procedure and I'm delighted that this 'public discussion' is being held before the DRBC is organized.

"In my capacity as Chairman of today's session I'd like to point out what our ground rules will be.

"Some of you have been asked to make ten to fifteen minute

verbal statements or submit written statements dealing with these three questions: (1) What would you like to see the Delaware River Basin Commission do? (2) What don't you want to see the Commission do? (3) What general principles would you like the Commission to follow in implementing its program and exercising its powers?

"The fact that some of you in the audience have not been asked to make statements reflects only one fact: we just simply haven't had time to contact everyone that might have wanted to make a statement. If any of you that aren't called wish to make a statement we will be happy to hear you this afternoon. Moreover, if any of you have any questions to ask the speakers or the gentlemen on the stage, please don't hesitate to do so after each speaker is finished with his statement.

"Close to twenty persons will make verbal statements today, and those of you that will, when your name is called and you come forward, please leave a copy of your statement with the young lady at the front -- if you have one. If you don't have a copy of your statement, please let the young lady know so that we're sure of getting everything that has been said.

"If anyone here has a written statement that they would like included in the transcript, please bring it forward to the young lady at the end of either this morning's or this afternoon's session.

"Sitting here on the stage are seven distinguished gentlemen that have already been introduced. These men represent both INCODEL and the Advisory Committee and are here to ask questions, if any occur to them, of those who make verbal statements. They are also here to answer questions, if they can, from those making statements and from those in the audience.

"If any of you have questions about the ground rules I'd like to

have them now. If you don't, our first statement this morning will be given by William Miller.

"Our first witness, William Miller, has been legal consultant to our Advisory Committee over a period of years. He is one of our teachers who has a teaching commitment later in the day. Therefore, without further ado, our first witness, Mr. Miller."

Mr. Miller - "Thank you, Mr. Chairman, and Friends. I find myself this morning in this position. We have had a day of mutual congratulations on having achieved so much sooner than we thought possible ---the compact. We have had, I dare say, an evening of some carousing, judging by evidence that I saw very plainly yesterday. We have had a night to think it over and now, are then faced with a rather sobering question of where do we go from here? It is somewhat like the man who had been on trial for bigamy and the jury brought in a verdict of 'Not Guilty'. The Judge turned to him and said, 'Well now young man, you are free to go home to your wife!' He turned to the court and said 'Yes, Judge, but which one!'

"I don't know that you could have asked a more difficult question than 'Where do we go from here' because we have so many places to go.

"The Compact we dare say, will be signed by the President before a week is up. He better do it because the constitution says something about that. And then, the order of business might be projected somewhat this way ---if I am permitted to dream a bit. First of all, it will be necessary for the President to appoint his representative. How long that will take is anyone's guess. Certainly, he is the only one who can tell. Probably he couldn't tell at the moment. After the President's representative is appointed, it will be necessary for the Commission to organize ---to meet formally, adopt rules of procedure, elect its

officers, appoint its key personnel. A great deal of difficult work to do before the Commission can even get started. Work which is not very exciting from the outward appearances, but which is essential. Outwardly, the first formal act that would look interesting is perhaps the most important in the life of the Commission and it will be never finished, and that is, the adoption of a Comprehensive Plan. Those of you who have watched the evolution of the Compact are well aware that the key document in the functioning of the Commission is the Comprehensive Plan, and normally this in itself would be a staggering responsibility and we never would know when it would be finished if it were not for the well known fact, that the Commission had before it the Corps' plan, which of course, would be the basic framework of any planning it could adopt. How long this will take is hard to say. Under the compact the Comprehensive Plan is not defined as such. It is in fact, anything the Commission deems essential to put into a record or, and I am reading, 'the immediate and long-range development and use of the water resources of the Basin.' Of course, 'the Corps' plan has gone a tremendous direction, rather has covered the ground in a very wide scope and the Commission starts there. But it may add, it may subtract. What it will do I dare say, will depend very largely on what groups such as this will put before it.

"In fact, the first step in the adoption of the Comprehensive Plan is public hearings.....hearings which perhaps might just be called a dry run illustration and only following public hearings and the consultation with all interested parties, would the Commission be able to adopt the Comprehensive Plan. After its adoption of course, it is not in any sense rigid, it is subject to continual review. It is expected that at least once in every six years it will get a very

thorough-going review because, as you know, one of the amendments put in by the Congress, with the acquiescense of the Basin Advisory Committee was a provision that the federal consent to any part of the plan could be terminated once in six years. This was a way of reassuring the Congress and the executive branch that national policy would not be neglected in the basin which is self-operating. Once we have a notion of what is in the plan, then the Commission will be in a position to go ahead.

"But its next step is even more difficult. As you know from the compact draft, what the Commission does is determined after the plan by what is called the Water Resources Program. For those of you who have copies of the Compact in hand, I am looking at Section 13.2. Let me just read that as a taking off point:

> 13.2 WATER RESOURCES PROGRAM. The commission shall annually adopt a water resources program, based upon the comprehensive plan, consisting of the projects and facilities which the commission proposes to be undertaken by the commission and by other authorized governmental and private agencies, organizations and persons during the ensuing six years or such other reasonably foreseeable period as the commission may determine. The water resources program shall include a systematic presentation of:
>
> 1) the quantity and quality of water resources needs for such period;
>
> 2) the existing and proposed projects and facilities required to satisfy such needs, including all putlic and private projects to be anticipated;
>
> 3) a separate statement of the projects proposed to be undertaken by the commission during such period.

"Obviously, this is quite a mouthful. What the Commission will do no one can really say with confidence because it has such a wide choice. Certainly its procedures are clear and, undoubtedly, it will select those projects which are most easily managed in the immediate future and will

defer those which require further research or which require further financing.

"In general, we must keep in mind that this Commission has, in making its selection, to be conscious of the fact that it has four different characters.

"First, it is a Planning Body. Its job will be as we have seen in the development of the Comprehensive Plan, taking into account the needs and requirements and resources throughout the Basin, and bring them together in a single plan.

"Secondly, it is a Construction Body. Here its job will probably be very small in the initial phases because the compact calls upon the Commission to use existing agencies as far as possible and, certainly, there are existing agencies which are well able to undertake major construction projects.

"Thirdly, it will be a Regulatory Body. Here again, the focus of regulation is the Comprehensive Plan. Its job is essentially to be sure that whatever is done in the Basin fits into the plan and defines some project which hasn't considered appropriately in the plan and, of course, will always be free to reconsider the plan. But regulation is tied essentially to the plan.

"Finally, the Financing Body, which again is rather a negligible thing at the start because the Commission will have no sources of revenue to speak of, other than what is provided by the Federal Government and the four states. But its financing characteristics will turn upon this very important function. Mainly, it will get together a financial plan for a project. It will seek interested parties that may have some financial stake in the project. It will develop, in other words, a unified approach to financing, and then, if that is satisfactory to

those who actually have to produce the funds, it will be able to carry forward with the financial plans. But as far as raising funds from its own resources, that is something for the future, if and when it should ever have revenue producing projects. The notion that it will begin to issue its own bonds very soon is of course, something that isn't entirely within the compassof what we are talking about.

"Well then, to take the cue from both the chairman at this side and the chairman at this side, I think brevity is called for this morning, and while there are a great many things you may be interested in, I think that I shouldn't try to cover them in advance but rather wait and see if there are any questions anyone would care to ask and, if there are, I shall be glad to try to answer them."

Mr. Bensinger - "While Mr. Miller is still here ---he is the best qualified man as to what is in the Compact and what the Compact will be --- this is your last chance to ask Mr. Miller in regard to statements he has made or from your reading of the documents produced."

Mr. Miller - "If there are no questions, may it always be thus."

Mr. Bensinger - "Thank you very much. You are now free to go back to your students."

Mr. Bensinger - "Our next witness will be Mr. Alvin Shumann, President of the Lehigh Valley Water Resources Council. Mr. Shumann."

Mr. Shumann - "I am here today as President of the Lehigh Valley Water Resources Council representing in excess of 600 members with widely diversified interests located primarily in the lower Lehigh Valley Basin, but including some members located in the Phillipsburg,

New Jersey area. It is recognized that the steadily mounting use and consumption of water in the Lehigh Valley make it necessary that the water resources available to the people of this region be administered and utilized in such a way as to provide the greatest benefits and produce the most efficient service for the residents of our area. It is also recognized that the most efficient utilization of the water resources in the Lehigh River Watershed are completely interwoven with the unified and comprehensive development of the water resources of the Delaware River Basin. Therefore, the comprehensive development and administration of the water resources of the Delaware River Basin including the Lehigh River Watershed require the fullest understanding and cooperation of the proposed Delaware River Basin Commission, existing local units of government including water and sewerage commissions and authorities and private business enterprises. We believe that the proposed interstate federal compact affords a unique opportunity and a sound basis for cooperative action at all levels of Government in that the compact specifically requires consultation with existing local governmental, civic and corporate organizations in the formulation of plans and programs for water resources development in the Delaware River Basin. In this connection we feel that it is important that as soon as possible after its creation the commission undertake to identify non-federal interests and establish uniform sound criteria, particularly with respect to the sharing of non-federal costs. The magnitude of the costs involved to accomplish the comprehensive development conceived by the United States Army Corps of Engineers clearly indicates the necessity of mustering the financial resources required from every possible source. We believe that as a general policy all interests participate in the cost of water resources development

projects in accordance with the measure of their benefits. It will be one of the missions of our Council to encourage and support officials of local government in decisions they will have to face in helping to provide a fair share of the local costs for a sound water resources development program. It will also be one of the objectives of our Council to help acquaint the citizens of our area with the merits and need for soundly conceived water projects. To insure an equitable basis of cost-sharing, we believe that the proposed commission should also establish, as soon as possible, sound uniform criteria covering the allocation of waters impounded in multiple purpose reservoirs that may be included in any comprehensive plan of development. Sound criteria faithfully adhered to by the proposed commission will do much to establish public confidence within the Delaware River region and will also set an example for the rest of the nation with resulting economy in overall water resources development. Such an objective on the part of the proposed commission will reflect to the benefit of the taxpayers of the four (4) states involved since this region contributes a high share of the cost of federally financed water resources programs. To insure an adequate supply of domestic and industrial water, it will be necessary to continue the excellent work done by Incodel on Pollution abatement. Adequate programs will have to be developed. The criteria should take into consideration the uses of the water in any particular reach of the river. A common sense approach will permit industry to use the water to maximum advantage in the safe area of the criteria established with a minimum outlay of expensive equipment for quality control of the water it uses. This will permit maximum use and reuse of the water until the time that increased use indicates the maximum of tolerance for aparticular criteria has been reached. Users might then be required to take the

necessary steps to hold the quality of the water within the established limits. We also believe a realistic program should be pursued to develop methods for site-taking well in advance of the need. If this is not done, urban sprawl will have occupied the sites and make them physically and economically infeasible. Consideration should be given to lease back provisions to keep this land productive until needed. The Army Engineers have repeatedly warned that major projects for flood control are only a partial solution to the problem. Programs should be established to assist local communities by supplying flood plain maps and other information necessary for their establishing adequate flood plain zoning and land use.

"One of the first things the proposed commission must do is to decide on the location of its headquarters. It is our understanding that an invitation is to be extended to the proposed commission to establish its headquarters in the city of Easton or the town of Phillipsburg. I shall leave it to others to point out the numerous advantages in this site. Our Council feels that certainly the headquarters should be located somewhere in the Allentown-Bethlehem-Easton area, and since Easton is located both on the Delaware and the Lehigh Rivers it seems to be the preferred location."

Mr. Bensinger - "Certainly it is abundantly clear that it is tremendously vital for local participation. This is an important and difficult task which this Commission is going to have to deal with."

Mr. Bensinger - "Our next witness is Mr. Ernest Erber, Areas Director of the Regional Plan Association, Inc. Mr. Erber."

Mr. Erber - "I should say at the outset to those of you who might not be acquainted with the Regional Planning Association

that we are a non-governmental, non-profit, research and planning agency established in 1930 and proposing various projects and guide lines for development for the New York Metropolitan region encompassing 22 counties in the states of New York, Connecticut and New Jersey.

"Regional Plan Association notes with great satisfaction the continuing progress being made in planning the long-range development of the Delaware Basin, especially the progress represented by Congressional passage of the federal-interstate compact establishing the Delaware River Basin Commission and by the recent publication of the Army Corps of Engineers' monumental report of their five-year study.

"Our staff has as yet not had an opportunity to review this report, and we are, therefore, not able to comment on its many proposals. However, we are favorably impressed by its scope and comprehensiveness. We are especially pleased by the inclusiveness of the plan's concept in that it assumes federal recognition of the need to co-ordinate development for flood control, water supply, hydropower, navigation, recreation and protection of fish and wild life. We are also impressed by the plan's recognition of the need for a single public agency for development and management of the Basin's resources. We are hopeful that the Delaware River Basin Commission will coordinate not only federal and state interests, but will also provide appropriate recognition to county and local government. In doing this, the agency will be pioneering a solution to the vital need for regional agencies of government which are truly representative of all levels of government, a problem with which Regional Plan Association has been increasingly concerned in the New York Metropolitan Region.

"We have taken special note of the time span incorporated in the plan's concept - a fifty year period extending to 2010. It is

encouraging to know that such long-range proposals for comprehensive development have been incorporated in the thinking of an official agency. However, it is also sobering to note that the first projects will not be operational before 1970, and that the latter date can be met only with enactment of approvals and appropriations on various levels of government without unforeseen delays. Regional Plan is especially concerned in this connection with the timely public acquisition of land for park, recreation and other open space conservation purposes. Our Association, jointly with the Metropolitan Regional Council, completed last year a major study on the need for open space in the Tri-state New York Metropolitan Region. The findings of this project, published under the title of "The Race for Open Space', reveals the critical situation which we face due to the consumption of land by private development out-pacing public measures to conserve open space. The report summarizes the outlook for land consumption as follows:

'A dramatic change has taken place in the rate at which the Region's land is being urbanized. A pronounced trend to larger land requirements for residential development has become especially significant. In the early history of the Region's settlement, houses were close together. The tenements of the turn of the century housed from 200 to 400 families per acre. This density was typical. Today the one-family house is the dominant type of residential construction; new suburban developments seldom have more than six one-family homes to the acre and even the four-acre lot is not uncommon.

'Other uses now also take up much more space: factories, shopping centers, highways and airports sprawl over many times the land they once did.

'Based on these indicators, a large proportion of the Region's land suitable for development may be used up by 1985. The most recent population forecasts combined with residential construction trends and the upward direction in both zoned and subdivided lot sizes point to a doubling or tripling of the current 2,000 square miles of urbanized land in the Region. This conclusion was reached by formulating two sets of assumptions concerning the future distribution of housing types and residential densities. The Project considers these assumptions reasonable in the light of present development patterns in the Region's growth areas.

'The first assumption, when applied to the Region's projected population increase and when allowance is made for development other than residential, would result in 2,200 square miles of additionally developed land by 1985. The second assumption would add 3,000 square miles to the Region's present 2,000 square miles of developed land. We can look forward to the day within the next 30 to 40 years when the Region's 22 counties will be virtually filled up.

'The Region's vast urbanized area has grown gradually over a period of 300 years. The prospect is that urbanization will at least double in extent during the next 25 years! The race for open space is clearly one of the greatest and most urgent problems to face the Region in its long history.'

"It should be noted that the race for open space concerns an area much larger than that of the New York Metropolitan Region. Low density, space consuming urban sprawl moving down from New York is already beginning to merge with a similar development moving up from the Philadelphia - Camden - Trenton area. In turn, the great toll-roads and expressways have shrunken the time distances between East Coast cities. As a consequence, the Delaware Valley, along with the Jersey Shore, Long Island and Cape Cod have become major recreational resources for a highly developed inter-urban complex running from Boston to Washington, D.C.

"Regional Plan Association is especially concerned with the need for early action to preserve open space in those portions of the Delaware Basin which are nearest to the tide of development moving across northern New Jersey. Interstate Route 80 will cross the northern tier of New Jersey counties and span the state from the George Washington Bridge to the Delaware. Portions of this expressway have been completed and others are under construction. The State of New Jersey is but 58 miles across at this point and it will be but 65 miles as Route 80 will run. This will place the Delaware River but an hour's driving time from Upper Manhattan. Experience has shown that the opening of an expressway through a largely rural area within a relatively short drive to a major

city results in the creation of a corridor of intensive development extending several miles to either side of such expressway. Such development is no longer limited to residential construction, but produces a complex of retail, industrial and commerical amusement establishments.

"Population projections by Regional Plan Association indicate that the New York Metropolitan Region's population will increase from some 16 million to over 22 million by 1985. There will be 1½ million more persons living in northeastern New Jersey by 1975, five years after the first of the Basin projects will be operational. Over six million Jersey residents will live from 30 to 90 minutes from the proposed recreational facilities in the Delaware Basin.

"Regional Plan Association is hopeful that agencies of state, county and local government will proceed without undue delay in taking steps to prevent the precipitous disappearance of open space in the Delaware Basin during the interim between completion of the new expressways and the unfolding of the Delaware Basin Plan.

"In closing, Regional Plan Association wishes to make an observation on another plane, that of our interest, as a citizen-supported research and planning agency, in the great citizens' effort represented by the Water Resources Association in the Delaware Basin Project. C. McKim Norton, Executive Vice-President of Regional Plan Association, serves as a member of the Board of the Basin Association and we have followed the progress of this effort for a number of years and have sought to be of such assistance as we have been able to render. My previous reference to an hour's driving time from the Hudson River to the Delaware and my reference to the tide of metropolitan development rolling across northern New Jersey indicates that we are more aware than

ever of the great community of interest which we have with those located within the Delaware Basin itself. Regional Plan Association has recently established a New Jersey Committee which I serve as staff from an office in Newark. We hope that the program being developed by our New Jersey Committee will create even closer links between Regional Plan Association and the many civic forces at work in the Delaware Basin Project."

Mr. Bensinger - "Being an upper county resident, I am quite familiar with the problem we have in Pike, Wayne and Monroe Counties in Pennsylvania, of a substantial influx of New York commuters, some of whom are now planning the construction of a rather large lake, 100 to 200 acres in size. This is not something which is a growl in the dark. Something must be done in the immediate future or the cost of acquiring these lands will be almost unobtainable."

Mr. Bensinger - "Our next speaker will be Professor Roger DeWiest, of Princeton University, associated with the Department of Geological Engineering. Professor DeWiest."

Mr. DeWiest - "Mr. Chairman, Ladies and Gentlemen:

"Let me first thank Mr. Frank Dressler, Executive Director of the Water Resources Association of the Delaware River Basin, for giving me the opportunity of expressing my views on research in water resources. I must admit though that I accepted his invitation somewhat reluctantly, since I am not yet a citizen and do not want to be deported for interfering in the internal affairs of this country. Also, as is customary, I wish to say that my statement is the expression of my personal viewpoint and does not necessarily reflect the opinion of Princeton University in this matter.

"In the first place, I was satisfied to learn that the interstate-federal compact has been approved by the U. S. Senate and is now awaiting the signature of the President to go into law. At this occasion, the topic of water resources has made headlines in the newspapers and has attracted the attention of students in engineering. In times where the prestige of civil engineering is sagging and where students are lured by the glamour of aircraft and electronics industries - products of the space age - one likes to see the importance of water resources emphasized.

"Two years ago a water program was instituted at Princeton University at the initiative of Dr. John C. Maxwell, Professor and Chairman of the Geological Engineering Department. This program of teaching and research in geohydrology is sponsored by a group of local industrial firms for a five-year period. It is hoped that the program will be self-supporting after this period and that it will be carried on jointly by the Civil and Geological Engineering departments. In the first two years we have been engaged in fundamental research including analytical work and model studies of earth dams, and the theory of leaky aquifers. While the former subject has been well received by the Bureau of Reclamation, we hope to put the latter studies to the direct advantage of some of our sponsors in the Camden and Philadelphia area, in cooperation with the Trenton branch of the U. S. Geological Survey. This then would be the first application of our work to an arealocated in the Delaware River Basin.

"As is pointed out by the Committee on Research of the A.S.C.E. Hydraulics Division (Civil Engineering, August 1961, p. 33-36) support for research is a long-standing problem for which there is no direct solution available. As a matter of fact, it is difficult to obtain

money for fundamental research that is not applied to the regional construction of some hydraulic structure, dam or reservoir. Yet the buildersof these structures borrow, without paying, from the knowledge acquired through research by their predecessors and should assume their responsibilities in supporting basic research. Princeton University, with its excellent facilities in science and engineering, is in an advantageous position to engage in such basic research.

"In the last few years the costs to support education and research have kept rising sharply as a result of increase in tuition and inflation in general. It is not uncommon to find out that projected costs have been underestimated. In our case, the money donated and pledged by our local sponsors will only suffice for a period of four years instead of five as intended unless we cut the number of supported graduate students.

"Finally, to answer the question of what I expect from the proposed Delaware River Basin Commission, I express hopes that this agency will allocate from its annual budget an appropriate amount to support research in water resources at those universities in and adjacent to the Delaware River Basin that have expressed their interest in such. Since the comprehensive plan of the U. S. Army Engineers has scheduled progressive stagesof construction reaching even beyond the end of this century, the needs for continuous research should become evident at once. Only if sufficient funds are available to support research on a continuous basis can we hope to revive an interest in the engineering professions dealing with the earth sciences and the earth's natural resources. Water is one of the most important resources and with increasing population and industrialization of the Delaware River Basin, the need for rational water consumption and conservation will

become more urgent. Without the training of an adequate number of specialistsin this area, we will not be able to cope with this problem."

Mr. Bensinger - "The next witness this morning will be Dr. Ruth Patrick of the Academy of Natural Sciences of Philadelphia. Dr. Patrick has been associated with this effort from its very inception. Dr. Patrick."

Dr. Patrick - "Mr. Bensinger and gentlemen of the jury. I want to state first that perhaps you do not know that I represent the Academy of Natural Sciences of Philadelphia, which happens to be the oldest institution in the Western Hemisphere which has been continually concerned with natural science research. Our department for some 14 years has been concerned with the basic research in trying to understand what makes a river tick. I have been concerned for some time, ever since I became associated with this effort, in thinking about what should be our long-range plan to preserve the multipurpose use of the Delaware River. This morning I would like to present to you some of the lines of basic thinking which I feel should be pursued in developing this long-range plan for preserving multipurpose uses.

"The Delaware River Compact will enable long-range planning so that the Delaware River may remain a multipurpose river able to support an expanding economy in the basin.

"The water resources and the quality of waterof a river are largely a result of the uses of its basin. Therefore we must be able to determine the extent to which changes in the use of the basin are affecting these characteristics of a river. For instance, certain types of agricultural practices, the building of highways, and urbanization may

increase the erosion of the basin and hence the suspended solid load of the river. Likewise, the flow of the tributary streams and the riverproper will be reduced by elimination of natural areas which through absorption of rain feed the ground water supply. During periods of low precipitation this effect will be particularly noticeable, for it is then that river flow is most dependent on ground water. A system of checks should be set up throughout the basin to measure changes in flow and suspended solids. The measuring of flow has been set up at certain points in the river basin by the U. S. G. S. These points should be augmented and turbidity should also be determined.

"The various uses of the Delaware River demand different quality criteria. These criteria for various uses in the basin such as recreation, drinking water, navigation, various types of industrial use, and commercial and recreational fishing should be clearly defined. Information available should be compiled and new studies, if necessary, should be made to determine whether the present quality of the water meets the requirements for the use of a particular area. For example in recreational areas, does the water of the streams of the area meet the quality criteria for good fishing, swimming, and boating? Also, some of these streams are used as spawning areas for migratory fish and their condition must be kept suitable for this purpose. For such an area the information available should be assembled and if necessary supplementary work should be done to establish a baseline of present water quality and stream characteristics so that future trends can be determined. Undoubtedly the flow and other physical characteristics such as deposition of suspended solid load are going to be affected by downstream dams. Therefore, the characteristics of the beds of the streams to be affected should be determined so that the effects of the

dams can be projected. Fish passages should be established on those dams below the more important spawning areas.

"The lower reaches of the Delaware are used as a source of drinking water, some recreational use, and industrial use, and in the mouth and upper part of the bay for shell and commercial fisheries. The proposed upstream dams are going to affect not only the flow but some of the physical, chemical, and biological characteristics of this lower section. For example, the elimination of floods and scouring action together with a more uniform flow may have both favorable and unfavorable effects on the quality of the water for multipurpose use.

"For example, due to the erection of a dam the water of the lower Delaware may be lessturbid and therefore more favorable for some uses, but it may lead to an increase in the amount of plankton both above and below the dams which may increase taste and odor problems as well as the algae nuisance problem. A regulated higher flow during the months when low flows are now common may reduce the shallow water areas of the river and thus limit the photosynthetic zone.

"The areas where photosynthesis can take place are the ones which are important for algae growth. It is the algae that are the largest producers of oxygen which is so necessary to maintain the assimulative capacity of a river.

"The elimination of flooding and scouring action may lead to a more rapid accumulation of silt and organic matter which if it becomes too deep may become septic. These are but some of the effects on the physical structure of the river below a dam and on the chemical and physical characteristics of the water. There will be changes in the aquatic life. Sometimes controlled flow increasesthe productivity of a river and will have other beneficial effects.

"Baseline studies should be made at various intervals below these dams so that trends in conditions following construction can be determined. These trends in condition will be a guide as to the assimulative capacity of the river and the amount of pollution it can absorb.

"Recently a new type of pollution, radioactivity, poses a problem to all uses of a river. Continuous monitoring devises must be set up so that at all times the levels of these substances can be ascertained.

"Certain basic scientific facts relative to the rejuvenescence of the Delaware River we know little about. For instance, we do not know what bacteria and fungi are most important in digesting the organic matter which enters a river, and thus help to bring about its rejuvenescence. Nor do we know the conditions for their optimum development.

"We do not know the chronic effects on fish and other aquatic life of small amounts of organic and inorganic chemical which often enter a river. A knowledge of these effects on fish may be a guide to these effects on man. There is much we don't know about the effects of temperature on aquatic life.

"Although there has been work on the tolerance of estuary organisms to low oxygen, high temperatures and chemicals common in industrial pollution, much stillneeds to be done.

"The oxygen cycles and productivity of the river in various stretches has not been worked out. This should be done if we are to judge its assimulative capacity correctly.

Conclusions

"The things to be done are:

1. To bring together all available data on the river and its tributaries. Much of this has already been done by the Army Engineers.

2. Lacking data, which is necessary to establish baselines of conditions, should be obtained.

3. Research should be started in order to obtain basic facts relative to the rejuvenescence of the Delaware River and necessary for its wise management."

Mr. Bensinger - "Thank you, Dr. Patrick. Colonel Setliffe, would you comment very briefly on whether or not the Comprehensive Plan envisions a study of the nature which Dr. Patrick discussed?

Colonel Setliffe - "To the best of my knowledge and belief it does not. The plan was authorized by Congress. Annually, Congress appropriates funds on which we operate. All of the funds came to the Engineers. The other agencies billed us and we reimbursed them for their expenses, and there just ain't no more money in that pocket. There is no more money to continue this.

"One thought occurred to me. I think just about all of the people referring to the plan, spoke in a very laudable fashion about the Corps of Engineers. I think that is proper. I heartily agree with it. I was proud of the Corps of Engineers when I got in it and I'm still glad I'm in. I will point out that the Corps of Engineers was among the first to recognize that wonderful Corps' plan. We fully recognize the assistance which we got from everybody else in this room. There's not anybody in here that didn't have a hand in this report. I have seen most of these faces in anywhere from four to six to eight meetings a year and we are all interested in the same thing. Yesterday, when General Lack

was telling us about one of his many interests here, it occurred to me that I could go along and list names like Lack, Allen, Pitkin and Hoff, and all the others, that made that report what it is. We're delighted to take all the credit but it is just as much your report as it is ours. It's up to you people to make it live.

"About all our recommendations have done is point out certain things you need to do on land. We are going to do to put ourselves in a position of going to Congress for those things requiring funds. If you notice, there are over $500,000,000 in this plan. Uncle Sam is putting up a little less than 40%.

"We thank you for all the credit but you people in this room made that plan and you all, I think, should start talking about it in terms of 'our plan'."

Mr. Bensinger - "Do we have any questions?"

Dr. George Jenkins - "I am scheduled to make a statement this afternoon. However, in connection with the remarks that have been made by my colleague from Princeton, and my other colleague from a research establishment, I would like to take this occasion to ask the research and academic committee to pay attention to Public Law 87-88, 87th Congress, H. B. 6441, Federal Water Act. This is also in succession to Colonel Setliffe's remarks. There is a continuing research interest of the Federal Government now authorized and that is the establishment or regular laboratories by the Public Health Service. To the best of my knowledge, Lehigh University is the only agency which has yet spoken to the Secretary of Health, Education and Welfare in an effort to see that a laboratory is established in the Delaware River Basin. I hope the efforts to put the entire Delaware Basin behind this petition to the Secretary will be carried out."

Mr. Bensinger - "Our next witness will be James Kerney, Jr., Executive Vice President of the Water Research Foundation. Mr. Kerney."

Mr. Kerney - "I am an historian; a current historian. There have been reports previously on some of our current history. I think all of you will agree the public has been somewhat confused by the number of organizations interested in the Delaware River. This was fairly natural but not to such a highly knowledgeable group such as this. You know the difference. We can tell INCODEL, the Advisory Committee, the Water Resources Association and Research Foundation apart. We know the duties and responsibilities but there is confusion in the public's mind.

"I think, if I may analyze a little bit the way in which the compact was adopted, it was attained because under the leadership of Jack Robin, we were successful in maintaining a complete state of confusion. There were moments when I was certain that only God, John Robin and Walter Phillips knew what was going on. God and John Robin had not confided in Walter Phillips and me. This, of course, is the nature of progress.

"I am tempted to make a further allegation....a rather gleeful one. Three of our four organizations are about to get it in the neck. INCODEL and the Advisory Committee will be absent. The Research Foundation will unquestionably go out of business because it has accomplished the task it had in mind for the Delaware. I have been an officer of all of these organizations and there is perhaps a note of sadness on the brink of the grave. But I am delighted the job has been done. Most important of all, I want to speak briefly on behalf of the Water Resources Association. Many of you know WRA grew out of a Committee headed by Dr. Jones, former President of Rutgers University.

There was a committee formed to determine what would be basic citizens interest in the Delaware River Basin development. The remainder of that committee is what is now the WRA.

"With these organizations about to depart.....with a new organization coming into being and into business, it is important that there be a citizens group organized and operating both to serve as a watchdog on the new agency and to serve also as an agency which can serve as a voice for the public interest on the part of the citizens' groups in these four states in guiding the development of our river. I urge the active support of all of you with an interest in the Delaware River Basin in the planning and programming of the WRA."

Mr. Bensinger - "The men who have constituted the Foundation and Advisory Committee are absolutely responsible for the organization which is the WRA and its existence as well as the compact itself."

Mr. Bensinger - "The next speaker for the morning is General Norman Lack, Vice President of the Water Research Foundation, Delaware Office. General Lack."

General Lack - "I don't mean to be facetious, but I talked myself out yesterday. One thing I would like to mention here and now is a word of caution. For four or five years I have been coming to Pocono Manor,meeting lots of people from watershed associations. After going home, I find that I have gained something; and with the passing of the Delaware River Basin Advisory Committee, I hope that this Annual Convention will not cease. I think it is up the the reconstructed WRA to carry on because, after all, we are all human and with our selfish interests we go home, start working on things, and we sometimes forget

the broad scope covered by the Convention. Therefore, I suggest that we seriously make this a permanent convention for years to come. We should carry on in some way among small organizations and not forget this Convention.

"I have learned a lot of very wonderful things this morning from Dr. Patrick and various other ones. We have all learned a good bit. I think in our own backyard we have things we don't realize we have. I was quite surprised to know that some farsignted citizens, after we built a new laboratory at the University of Delaware, were even unaware that it existed. It can be used for many hydraulic studies. The new Compact Commission can well afford to make use of it for their purposes.

"I would like to point out that this Compact is sort of like an old football kicked at incessantly. Then you go out some morning and it is sort of soggy. The passing of the compact by the Congress has sort of left the compact soggy. I hope that we start out this thing with a word of caution, start out slowly, and pick up as we need to. Our great master plan is only some old sheets of paper, finally printed, but from it has to grow changes every meeting, changes every year, and changes every six years.

"I have been in the Corps since 1917. They finally kicked me out because I'm too old. They have done a wonderful job and without their help, we would have an almost impossible task.

"Everything we do in the Valley is different. My State of Delaware is supposed to have the highest per capita income in the country, but we are still one of the poorest states. We have problems in water which you don't have. You live on mountain water. We live on sour water. Every ten drops you take out, you put back seven dirty ones and we get it. We must move our wells inland because of the salt water.

Eighty-nine percent of Delaware is below the Chesapeake and entirely surrounded by salt water. In drilling wells, we go down so far we strike salt water. We must find a happy medium."

Mr. Bensinger -"Our next speaker is Mr. Clayton Hoff, Executive Vice President of the Brandywine Valley Association. Mr. Hoff."

Mr. Hoff - "Inasmuch as Judge Robin has left this Court, I can't address him, I shall adress the jury.

"I am reminded of the definition of a specialist. 'A man who knows more and more about less and less.' As time goes on today I find that more and more of what I had planned to testify has already been said. However, I will plan to do something constructive rather than destructive. I will take the positive approach rather than the negative approach. I decided that when I took a shower this morning, when I saw this beautiful green mat at the bottom of my bath tub. 'This was placed here for your safety, convenience and comfort.' It could have said 'Use it or break your neck.' I like the positive approach to this.

"I want to comment in as much as most of the things that I had planned to testify have already been covered, my comments will be necessarily rather spotty and incomplete.

"I do want to make one comment on Mr. Miller's discussion in which he mentioned as functions of this Basin Committee - planning, construction, regulation and financing. I would like to add to that public information because without it, I think the others are questionable.

"Mr. Kerney made a statement which I'm for and would like to repeat in perhaps a slightly different form. It is my opinion that the Delaware River Basin Commission should supersede, consolidate and co-

ordinate most of the basin wide or quasi-basin wide organizations in order to eliminate or reduce the confusion on the part of the public as to what is what. Also, at the same time, I believe that this Commission should not eliminate the services of existing organizations or replace them but co-ordinate them, avoid duplication or competition and consolidate them into a close knit, well defined single organization. So that any individual interested in any part of this program or any of the projects can and will have one organization to which to communicate and there may be sub-divisions or sub-committees of that organization to which the Chairman of the Commission may want to relegate certain responsibilities or inquiries or others.

"It is also my opinion that this Commission should utilize and direct effectively all Federal, State and perhaps County services connected with natural resources conservation and development in the basin. It also, I believe, should with the help of these agencies develop comprehensive and local projects to implement the plan. I put 'plan' in quotation marks because actually, we do not have the plan yet but I thought by this time that someone would have mentioned more details about the plan but without question, that plan will be built right closely around the survey and the recommendations of the Engineers' report. Therefore, I refer tentatively to aplan as a plan which would broadly and comprehensively implement the recommendations of the Engineers' report. And to implement that plan I think it is necessary that we resolve that into projects, and that the local agencies be brought into play and to help in developing those projects as well as carrying them out.

"Perhaps it should be the responsibility of this Commission to study and develop a most effective type of organization chart or flow

sheet. First, to inform the public. Secondly, for the public to inform the Commission. In other words, it will be a two-way affair. Our Water Resources Association of the Delaware River Basin is now doing that to a very commendable degree. Perhaps that should be the division of this Commission which should carry on this, but I mention this as a need and an important part of the work of this Commission. Now that organization, toying with the idea, might be of two different categories:

1. It might be involving the Commission, then down to the state level, to the county level, to the people - or through peoples' organizations.

2. Or it might be the Commission, down to Watershed organizations and then to the people.

"Both have advantages and disadvantages.

"Logically we are working on a large watershed in the Delaware Basin and the people in the watershed have more in common than they do in certain political units. So carrying out the basic premise, if the whole Delaware Basin were broken down into watersheds and organizations created to administer and develop the affairs on the basis of a smaller watershed, it would be a logical arrangement insofar, as the effectiveness and carrying out of the basic principles that a watershed is the logical unit on which to work and we are compelled to work on watersheds in many of our structural projects. However, it has adisadvantage. In our case, here in the Delaware River Basin that there are relatively few of the tributaries that have watershed organizations or associations. So that would mean if to carry out that method or organization we would probably delay action until we created watershed associations. Whereas,

if we work through the county level, we have official organizations that can function as a unit in the organizational affairs of the entire Commission.

"It is undoubtedly important that this Commission through one or the other of these channels explain what the program is, the plan or the program once it is developed. By the way of speakers, films, television, radio, publications, demonstrations, tours and all other means which are effective in conveying to the general public the plans and programs of the Commission and also, through them, keeping our ears to the ground we will be able to relay back to the Commission the feeling and sentiment of local people.

"Perhaps, this Commission should also cooperate with local communities and watershed associations in doing more detailed study of water resource needs in our separate communities. In this respect, it might be possible for new organizations throughout the Valley to do similar work to what the Neshaminy Watershed Association, Red Clay and perhaps the Brandywine have done.

"In that connection I heard the word multipurpose used --- multipurpose use of the river, multipurpose use of the streams and lakes. That has two connotations. First of all, the multipurpose use of a stream or lake probably results in the lower possible cost for all things that the stream is used for. It also probably is conducive to prolonging and delaying many operations due to the complexity of the problems which arise.

"I point out first the economy, referring again to the watershed with which I am most familiar ---that is the Brandywine. The cost of water to the local people due to the fact that the water supply project was developed will provide water for a great number of uses, for re-

use for water supply, for flood control, recreation, irrigation and all of that, and by virture of the fact that with many uses for it many people are sharing in the costs or will share in the costs of producing this water. With the result, that the cost per gallon of the water to the local people in the Valley is extremely low. Let's compare that with the cost of water produced by two proposed reservoirs in New Castle County which would primarily be used for water supply but providing some recreation. Discounting the recreation and considering only the cost of that reservoir construction more water to the local people. Each gallon of water produced by the proposed reservoirs in the New Castle County in this Engineering Report would cost 13 times as much per gallon as the water produced in the Brandywine water supply and flood control project. And that low cost is due to the fact that multipurpose use and multi-purpose financing and multiple financing and multiple support of that. On the other hand, we all recognize that in our own area the fact that there are so many different people involved in this has perhaps delayed this project by years. And I would anticipate that in the planning and programming of the Delaware Basin project that we would have to weigh very carefully the expedience of getting some things done which may be directed for one use versus the longer time, longer planning, more complicated financing, more complicated construction and use which would be involved in multipurpose use of some of these areas.

"Perhaps it might be afunction of this Commission to encourage the formation of watershed associations on tributary streams. And certainly, it would be very helpful if this Commission could promote the formation of soil conservation districts in any and every county in the Delaware River Basin. Most of them now have been created as a district conformed to the county type of organization and has been very

effective in working on the soil and forests as well as the waters and I think what we all must recognize that we cannot work on water resources alone without getting into forestry problems, soil problems and planning and other things of that nature.

"Another urgent problem I think, which has been touched on, I would like to repeat. That this Commission should take the responsibility for or assist local people in site acquisition or with the comments that have already been made, upon the acquisition of land for open space, the rapid increase in our population, the rapid development, housing development, commercial development, highways and so forth. It is expedient to acquire sites that will be used for water supply at the earliest possible moment. Also, this Commission could be a vital help to all communities, all organizations, counties or local organizations in assisting in making flood plain surveys and in plans and in flood plain zoning. Probably more important, or including that as a part of this, would be its value in assisting states, counties or local areas in comprehensive long-range planning and zoning.

"This has been reported as being a trial, and the Commission now I think, is the object or the person who is on trial. It has not been deemed guilty of everything. I think, however, this trial is one of providing a guidance so that the Commission will not be guilty of anything for the future in outlining a program which it would and could probably follow.

"I feel very strongly about that because as President of the American Watershed Council in the late 1940's, we worked with the President's Water Resources Policy Commission. The chairman of that being the engineer, Morris Cooke, and as a result of that survey, a very remarkable publication, Twelve River Basins of America, was

produced. However, in the case of the report of that Commission quite in contrast of the testimony of the watershed associations and watershed organizations that help in preparing this report, and the report was sidled over a quite and opposite direction from what the testimony that had been given. I think that is reflected in the statement made yesterday by Mr. Wendell in regard to the Anderson bill. It appears that that bill like the recommendation in the President's Water Resources Policy report of 1948 or 49, placed the preponderance of control in the hands of federal representatives rather than in the hands of the states or local people. That was its chief objection. It still, however, is a very valuable report because it contains information which any Commission of any river basin the United States could very valuably use. It's very valuable as far as engineering data is concerned.

"Here again, I think, our Delaware River Basin Commission is on trial. I predict a wonderful future for it. It is a pioneering organization. It has an opportunity that has never been presented heretofore, in any river basin of the United States to show that this is the right method of handling our natural resources, and I think, with the progressthat has been made with the program that has been started, it will serve as an example to all other river basins and watersheds in the United States."

Mr. Bensinger - "We have one more statement before we adjourn, and that is from Mrs. Charles Kellers of the New Jersey League of Women Voters.

Mrs. Kellers - "I am Mrs. Charles Kellers speaking for the Inter-League Council of the Delaware River Basin made up of representatives of the League of Women Voters of the four Basin states.

"This statement is based on the premise that the compact is signed and the Commission appointed in the near future.

"Our special interest is in providing the necessary public information. Since the purpose of the League is to provide political responsibility through informed and active participation of citizens in government, it naturally is concerned about the duty and power of the Commission to offer 'grass roots' education and information adequate for stimulating necessary local interest and support to successfully implement the comprehensive plan.

"We feel that this can be accomplished in two ways - (1) by holding public meetings in areas where projects are being planned to explain the goals of the projects, to learn the interests of the area concerned, and to enlist the necessary cooperation, (2) a well-defined program for disseminating published reports and news stories to keep the whole Basin area apprised of the progress of the development program.

"This vitalized information program should offer specific advice as to the roles which the municipal, county and state governments will have in initiating plans and developments for increased water supply, flood protection, pollution control, watershed management, recreation and local planning and zoning. Practical advice should be given on where and how to get technical assistance for promoting and directing such programs and how best to relate local procedures to the over-all regional plan for the Basin.

"Information should be given to all levels of government and interested agencies as to existing provisions for cooperative efforts thus providing and encouraging practical suggestions for stretching the tax dollar by eliminating duplication of effort, and pointing out ways for

pooling economic resources to meet ever increasing costs. Such procedures will help to create the public confidence needed to approve larger appropriations for state projects.

"Funds should come from diversified sources, governments and private interests sharing the costs in relation to benefits received and ability to pay. As far as possible, the basin agency should have control of these funds and considerable leeway in applying them to the various water resources programs in the basin.

"A stimulating program of public education will be needed: to prick the many balloons inflated by local pride, to create the desire on the part of local governments to cooperate with neighboring communities, to economically provide for the water needs of the more than 800 mushrooming Basin municipalities.

"Just as it is necessary for the Commission to get its story across to the people in the area, so it is equally important for the people to let the Commission know their interests and esires. The LWV believes that the creation of a strong Advisory Committee representing state, regional and local interests is most desirable.

"For the comprehensive plan to be successful it must be flexible. Public interest must be sustained to make appropriate suggestions from time to time which reflect the changing needs and condition of the Region. Provisions should be made to keep the plan a vital instrument to which all future water resource plans and developments of the area can be related.

"The success so far of the acceptance of the physical plan for development and the legislation for its implementation has been due to the broad cooperation with all interested groups in the area.

"We shall hopefully watch for continued cooperation in the accomplishment of the purposes of the compact."

Mrs. Slobod - "I am Mrs. R. L. Slobod representing the League of Women Voters of Pennsylvania. As a member of the Inter-League Council on the Delaware, the Pennsylvania League, of course, concurs in the statement which the Council has made on the behalf of the four state Leagues, but we would like to add the following.

"Although the Delaware River Basin area comprises routhly only 14 per cent of our total drainage area, the Leagues in Pennsylvania feel a statewide concern for developments in this area. It is, of course, a very populous and economically a most important seventh of the Commonwealth; our total concern, however, springs from a different angle. We are concerned with all of our water resources and all of our river basins. In view of our belief that the best approach to water problems is through the river basins etup with responsibility clearly centered in a single agency, we will watch with interest and concern the pioneering progress of the Interstate Compact Commission because we feel that the future of the rest of our basins may well depend on the success of this unique regional body. We hail its emergence from Congress as we have cheered its successful passage through our own state legislature.

"We are aware that the success of almost anything depends on the type of leadership which it receives. Surely in designating the governors of the four states as commissioners, the success of the Commission will be assured. We would venture to urge the governors, however, when making the appointments of alternates who are empowered to serve in their stead, to consider their selection carefully and to choose on the basis of ability and dedication to the region in its entirety. In addition, we would particularly urge the President to use the same criteria in appointing the federal representative. As to the selection of the permanent staff to carry out the policies of the Commission, we

trust that they will be chosen on the basis of education, experience, and previous accomplishments.

"Under the general powers of the Compact, we would like to suggest that basic research be emphasized as it is obvious that more technical knowledge will be needed to keep pace with the mounting problems of the population explosion. Research on better methods of sewage treatment is only one example of many things which should be done so that we may meet the needs of the future. Another aspect in the general field of research would be the establishment of a clearing house to co-ordinate what is being done and to make available knowledge of what has already been done by the myriad agencies involved. Indeed it would be a great service if the Commission would oversee a cataloguing of data compilation.

"We hope, and expect, that the Commission will serve with flexibility, imagination, and vision. Thank you for this opportunity for appearing before you."

Mr. Bensinger - "Are there any comments or announcements anyone would care to make.....We have received a dose of information this morning and covered a large number of speakers. The meeting stands adjourned until 2:30 p.m.

The meeting was called to order by Mr. Charles Bensinger at 2:30 p.m.

Mr. Bensinger - "There are still a number of witnesses who desire to testify and as we previously indicated the statements will be brief and to the point. Actually, we made a lot of progress this morning and got through more than half. We would like to call our first witness for the afternoon, Mr. Frank Bowden, Secretary of the Delaware Valley Council. Mr. Bowden."

Mr. Bowden - "Now that the Compact is a reality, the Council offers the following suggestions and comments for developing the water resources of the Delaware River Basin:

1. As a toll-free facility, every effort should be made to encourage navigation in the tidal estuary of the Delaware River including the taking of such steps as may be necessary to provide deeper water in the channel.
2. No user charges should be imposed on either industry or municipalities that continue to use reasonable quantities of water, as in the past, for industrial use and public supply purposes.
3. In the construction of projects, every effort should be made to further the American competitive enterprise system. Power developed through the operation of dams should be distributed and sold, not by government, but by private sources.
4. In view of the importance of the project, plans for the development of Tocks Island should be given immediate consideration. Planning should be undertaken now. At an early opportunity a separate appropriation bill should be introduced into the Congress as a vital

step in expediting the project.

5. Immediate attention should be given to the securing of local assurances, including financial cooperation, for the several projects. As you know, these projects cannot be completed until stipulated conditions are met by the local communities. It would seem that the Water Resources Association would be a logical and desirable group to co-ordinate the work of the many agencies that will be involved in helping to secure local assurances. We of the Delaware Valley Council wish to pledge nor our cooperation in this regard.

6. Early and more detailed attention should be given to the question of how non-federal costs will be shared by non-federal interests.

7. The professional qualifications of Incodel's staff members should be reviewed and every consideration given to employing them as staff members of the newly formed commission. Their experience and professional qualifications should serve the commission well in providing a vital link between past and future planning.

8. Delaware Valley Council believes the new commission should be headquartered in Philadelphia, or in another large city located in the lower section of the Delaware River Basin. This will enable the commission to best serve the high concentration of business and industry located there.

9. All involved in administering the Compact should make every effort to carry out the spirit of the Compact and continue in balance the proper federal-state relationship. The role of the federal government must not become dominant.

10. Policies and actions of the new commission, when promulgated, should be given the widest possible dissemination among members of the

Delaware River Basin Community. Where projects immediately affect a local area, every effort should be made to keep the public fully abreast of developments. Public hearings and other democratic processes should be employed to gain the public's reaction to plans and proposals."

Question from Audience - "I am not sure I understand your point regarding the cost of water supply."

Answer by Mr. Bowden - "I have in mind those industries taking water directly from the Delaware River, using it for cooling purposes, and not returning it to the River. We don't think they should be charged for this."

Mr. Bensinger - "There was substantial testimony before the Pennsylvania Senate in relation to that point of the Compact."

Mr. Robin - "As I believe it to be the case, the Compact Commission cannot make such charges and, therefore, will not. There's no determination in the Compact, however, as to how the state may choose to finance their respective portion of any project and the revenue capacities of the state are left unchanged by the compact. Consequently, these will be state decisions. One state may decide to have general taxation to finance its part of any project. Another state may decide to have user taxes. You just can't anticipate that. But that will be a matter of public policy in each of the states. However, I want to re-emphasize the Compact Commission cannot make such charges."

Mr. Bensinger - "Our next witness is Mr. Carlton Tillinghast, Executive Vice President of the New Jersey Taxpayers' Association.

Mr. Tillinghast."

Mr. Tillinghast - "Policies re: Delaware River Basin Commission

1. As to the Federal Government -

In the events leading to enactment of the DRB Compact, official and unofficial proponents alike strongly and successfully resisted the inclusion of features that would lead to unilateral Federal control. Now that the Compact is virtually assured, there is an implied responsibility on the part of the states to accept their fair share of the resulting financial burdens. Therefore we believe that every effort should be made to limit Federal fiscal responsibilities to those areas which are not basically the responsibilities of the states, and not seek to impose upon the Federal Government new types of cost which can only result in enlarged Federal domination and at present can only be financed by increasing the Federal deficit.

2. As to the service charges -

We suggest that at the earliest possible time the Commission proceed with cost studies, embracing all costs ---operating, capital and debt ---, with a view to determining:

- which costs can practicably be placed on a reimbursable basis and therefore be charged to users, and
- which of the remainder fall within the area of established Federal responsibility,

for the purpose of (1) insuring that beneficiaries assume the cost of services received and (2) achieving an equitable distribution of the remainder among the four states and the Federal Government.

3. As to operations -

We believe that the Commission should enter only those programs

which cannot be satisfactorily executed by the individual states. Thus it should avoid assuming functions which customarily have been or can be assumed by the states and give every possible aid toward co-ordination of such functions (1) among the several states and (2) between related programs carried on by the states and the Commission."

Mr. Robin - "The Commission is expecting to use existing agencies of the Government. Also, one of the virtues of the Compact is that the Governors of the four states comprise the governing body of the Compact. Both by its structure and instruction on this matter, the Commission will work through established agencies where possible."

Mr. Bensinger - "The next speaker will be Mr. Hal H. Clark, President of the Delaware River Protective Association. Mr. Clark."

Mr. Clark - "We represent the Delaware Valley Protective Association, established in 1933 with a membership concentration in an area extending from Easton, Pa. and Phillipsburg, N.J., south to Trenton, N.J. and Bristol, Pa., and spreading east and west on both sides of the Delaware River. For 28 years our group has promoted and publicized soil and water conservation, flood control, flood plain zoning, pollution abatement, park and watershed developments and other related projects in co-operation with local, county, state and federal agencies and civic groups.

"While we celebrate the magnificent compact between the four states and the Federal government we should immediately concern ourselves with the tremendous responsibilities we must accept to make it work. In the opening paragraph of our 1955 report on Conservation Practices and Needs in Bucks County we said: 'The life and death struggle for human survival encompassed in long-range plans for soil and water conservation

and control remains a blind spot in the public mind. And this despite dramatic headlines about floods, droughts and dust bowls. The general public is against these things like it is against sin--something vague and distant. But it is as close to them as their dinner table and water spigot.' We have got to make them see it.

"This means that there is a massive job to be done at the citizen level requiring co-ordination of all of our agencies of communication, and the co-operation of every civic group in the basin with the administrative Commission and with local county, state and federal officials and agencies and watershed groups. Goethe said: 'There is no more terrible sight than ignorance in action.' We will have ignorance in action unless we do this job well.

"Therefore we trust that the Compact Commission will be able to make good use of an already built-in and effective tool of communications to every part of the Basin---The Water Resources Association.

"There is a good point in a story we heard about Charles Bensinger, President of WRA. Playing golf in his beloved Poconos he teed up his ball, took a mighty swing and hit an anthill. 3,000 ants were blasted into the air. His second swing brought up a couple thousand more. At this point the two remaining ants looked at each other and one said, ' If we want to stay alive we better get on the ball.'

"In his report to the Select Committee of the U. S. Senate, Secretary Goddard of the Pennsylvania Department of Forests & Waters said: 'The Sanitary Water Board, with the planning and assistance of INCODEL, through a persevering pollution program, managed to reduce pollution on the Delaware by half over a 20-year period, despite the fact that industry grew by a third in the Delaware Valley over the same

span.' At this time the DVPA wishes to pay grateful tribute to the pioneer work of INCODEL. We are building today on foundations INCODEL laboriously constructed. We trust that INCODEL talents will continue to be put to good use. (Mr. Pitkin and Jim Allen)

"In the overall picture of administration we recommend that nothing be done by government that cannot be done as well or better by private enterprise. We do not believe that we should kill the goose that lays the golden tax eggs.

"With political sub-divisions we encourage the policy of co-operation rather than interference on matters which the political sub-divisions can and will handle satisfactorily on local, county or state levels. Co-operation is our indispensible lubricant. Andrew B. Young, in behalf of the Greater Philadelphia Chamber of Commerce before the U. S. Senate Select Committee said in part: 'It is sufficient to say that local problems seem paramount in communities; that there are differing objectives to be obtained*****Fortunately the people and governments of this Basin have had experience with working together on similar problems*****Areas around communities are experienced in joining in the advancement of their common interests.' We agree with Mr. Young, but it means continuous and uninterrupted hard work. We have a brand new kind of a baby that may grow up to set precedents and establish policies of benefit to the entire world despite Mr. Udall's 'odd ball' designation. Complex problems will need many adjustments and we will be on trial. Perhaps, we could profit from the policy established by Rear Admiral Paul D. Stroop, Chief of Navy's Weapons Bureau. He called his Project KISS. That stands for Keep It Simple, Stupid.

"We recommend a thorough study of flood warning systems along the Delaware River. Sometime ago TV Station WFIL, Philadelphia, did an

interesting on-the-spot picture story on this subject from Bear Creek on the Lehigh, to Trenton. In the area from Easton to Trenton no effective system has thus far been setup. A review of this picture story by the Commission would be valuable. We understand the Lehigh Valley Association has an excellent program. A meeting of those interested in or involved in flood warning protection would help to improve the situation.

"For small streams, the Neshaminy Valley Watershed Association has developed, with assistance of state and federal agencies, a remarkably efficient flood warning program that is now being developed on other small streams in the Commonwealth. We urge co-operation with this work.

"In the mad pace of our so-called 'March of Progress' we are prone to overlook the problems of the man who keeps us alive----the farmer. His love of the soil and courageous defense of his farm acres has been a major factor in keeping some of our irreplaceable open lands for future generations to enjoy. His problems should receive the sympathetic attention of the Commission.

"We urge the enactment of laws to protect stream valleys and establish flood plain zoning. We hope that the Commission will recommend such legislation by the states and by other political subdivisions.

"Before the Select Senate Committee, the Pennsylvania Fish Commission stated that pollution is its greatest problem and greatest threat at present, to the future recreational use of water. We may add that it is a deadly threat to general living conditions. Dr. Goddard in his statement before the U. S. Senate Select Committee, commented that Pennsylvania's Clean Streams program has drawn national attention.

The clean-up of the Schuylkill is called the biggest river project of its kind. In five years Pennsylvania spent thirty million dollars more than any other state. But it is not enough. It must be pursued more diligently at lower levels.

"Bucks County, facing a tidal wave of industry and population, obtained the first county-wide sewer and water study ever made. Albright and Friel, in co-operation with our highly qualified Planning Commission and County Department of Health (there are only four such in the state) produced it. Maps and recommendations are projected for 1965, 1980 and 2010. It is now in preliminary stages of development. In the meantime, Township Authorities are working to solve parts of the problem in harmony with the study recommendations. Dr. Goddard has granted priority water rights to Bucks County when the seven mile lake on Tohickon Creek is completed in the new state park, as an aid to the sewer and water program. We urge the Commission to co-operate in this worthy project.

"An area of pollution remains unsolved. We refer to disposal of cesspool and septic tank sewage---called the worst public works problem in America by Fortune Magazine. Sewage haulers must hunt their own disposal areas and they are not the best. We favored enactment of a measure in the Pennsylvania State Legislature that would make it necessary for every township, borough and city to specify a place for disposal, certified as safe by the health authorities. It died in committee.

"Because of these conditions and the importance of the Compact area we recommend that the Commission urge Abraham Ribicoff, U. S. Secretary of Health, Education and Welfare, to locate one of the new field laboratories and research facilities, relating to the prevention

and control of water pollution, in the Delaware River Basin. This will fulfill the commitment for the Middle Atlantic States. The enabling law is known as the 'Federal Pollution Control Act (P.L. 87-88, 87th Congress, H.R. 6441.)'

"The predicament of a small town in the privy and cesspool belt is illustrated by the famous borough of New Hope, Pa. This summer New Hope had to bring in some portable privies from the outside to take care of their visitors. Problems immediately developed. Here is the report of the New Hope Gazette: 'Carleton Smith, President of the Business Mens' Association and one of the men responsible for bringing public comfort stations to New Hope this year, now believes that the privies should be removed. Reason for Smith's irritation is the fact that women are continuing to cheat the Business Mens' Association out of the ten cent toll. Says Smith, 'the other day, four buses pulled into the Logan Inn parking lot and when all the women had finished using the privies we checked and found they had deposited a total of 30 cents. It costs us $1200 a season. We can't afford it.' Smith added that he has no quarrel with the men. 'They're paying their way,' he says. Gone are the days of Privie Pride and the Tall Sunflower contest of the old timers with the winners planting their entries right next to the good old privy. Such problems (as this news report illustrates) can only be remedied through the success of the county-wide sewer and water plan. Pollution abatement and low water augmentation have major importance.

"We need clean water for our recreation program. As a member of the Bucks County Park Board, we are happy to say that we are now creating, through the authority of our County Commissioners $1,500,000 worth of parks to add to those we have obtained by gift and we are being

ably served by a non-profit park foundation patterned after the famous Western Conservancy. The Park Board, Planning Commission, Health Department and Industrial Development Corporation are co-operating in a master plan to provide orderly progress in place of chaotic suburbicide. We now have a Conservation District established enabling full fledged watershed development.

"Across the river in Hunterdon County, N.J., our membership is helping to setup planning and zoning boards and a park commission. They have already helped to prevent the building of 48 homes on 37 acres on Bull Island which was entirely covered with water during the 1955 flood. Their parks and recreation programs in co-operation with the state are worthy of support.

"Between Lambertville and New Hope on the Delaware, an outstanding program of water recreation has been developed by the Power Boat Association and by Bob Stout and Roy Cooper who operate attractive River Boats with such names as Coryell's Ferry and Captain Daniel Bray, the man who got the boats for Washington's famous trip to Trenton. They hope to have a fleet in the area of Washington Crossing State Park, providing they obtain permission to build docks. The fine river lake between New Hope and Lambertville is there because the Union Mills Paper Manufacturing Company maintains two wing dams. How long this will continue we cannot tell. The wing dams have given New Jersey and Pennsylvania a wonderful free recreation lake that has attracted thousands of water enthusiasts. We would like the two states to consider the maintenance of the dams if they are ever in jeopardy. Raising them from one to two feet would greatly increase the opportunities for water recreation. Pennsylvania is interested. We hope New Jersey will also be interested. And we hope that the new Compact authority will be

co-operative and pleased.

"Paralleling the Delaware River is the beautiful and historic Delaware Canal in Theodore Roosevelt State Park where Pete Pascuzzo runs his fleet of mule-drawn barges---the most publicized attraction of the Commonwealth. Our association is given credit for protecting and preserving this park with the great help of Secretary Goddard of the Department of Forests & Waters. We believe that the proposed Commission should know what our people are doing on the county and township levels to meet local responsibilities.

"The August 1961 issue of Bucks County Life Magazine featured an anniversary picture story on the 1955 flood. Our contribution was an editorial appeal to the public under the heading, ' Help Tame the Wild River.' We stressed the things that are being done to prevent such disasters, all centering now on the successful establishment of the Compact Authority and guaranteed by the finest U. S. Army Engineering plan ever completed on the nation's rivers. We concluded with these words: ' If you want to be sure that the land you live on will be protected from floods, that you will always have pure water and good soil in which to raise your food, green belts to keep the healing touch of nature near your door, woodlands and meadows and streams for healthy sport and if you want your children to enjoy all of these benefits, please take an active part in brining this great project to a successful conclusion."

Mr. Bensinger - "Our next witness is Professor George R. Jenkins of the Institute of Research of Lehigh University. Professor Jenkins."

Professor Jenkins - "My sympathy is with the speaker this

morning who said he was going to say things that already had been said. This probably grows in magnitude.

Historical Considerations

Those of you who have followed the activities of the Interstate Commission on the Delaware River Basin are fully aware that these activities have included research throughout the existence of the Commission. Its own personnel have conducted numerous investigations. The Commission has sponsored many others, conducted by universities and scientific laboratories. And it has cooperated with a host of agencies, Federal, State, local and private, in the collection and evaluation of basic data.

The missions of numerous agencies of government, at all levels have included the collection of data. This has required research efforts to determine what should be observed, to devise the instruments of observation, to maintain the observationalnetworks, and to continuously evaluate the data. The Geological Survey, Weather Bureau, Corps of Engineers, Public Health Service, Forest Service, and Soil Conservation Service come to mind among the Federal agencies. The counterparts of most of these agencies may be found among the offices of the several States, along with other State agencies, such as those concerned with fish and game. The larger municipalities also have made significant contributions, as have some of the water-using industries, to our knowledge of Delaware Basin water resources. In the area of the social sciences, the role of Water Research Foundation has been critical.

Most notably, the Corps of Engineers recently completed its monumental comprehensive study of the Basin. In itself a large-scale research task, its dependence upon the long history of study of the Basin is obvious.

Current Considerations

Although the Corps of Engineers report and its companion, the Syracuse University report, are indubitably comprehensive, it is likely that their authors would be among the first to agree that they reveal innumerable needs for additional knowledge in order to be more certain of proper measures to be taken. This does not mean that the reports are not indeed a sound basis for undertaking those constructive measures which they recommend, particularly those that contributed so much to formation of the compact and the engineering projects that are proposed for early development.

On the other hand, as an indication of the state of our knowledge, it is significant that on July 20, 1961, President Kennedy signed Public Law 87-88, 87th Congress, H.R. 6441, legislation to amend the Federal Water Pollution Control Act. Among other provisions, the amendment states that 'the Secretary (of the Department of Health, Education and Welfare) shall establish, equip, and maintain field laboratory and research facilities including....one in the Middle Atlantic area....for the conduct of research, investigations, experiments, field demonstrations and studies, and training relating to the prevention and control of water pollution. Insofar as practicable, each such facility shall be located near institutions of higher learning in which graduate training in such research might be carried out.'

We at Lehigh University, and perhaps others unknown to us, have requested the Secretary to consider the establishment of the Middle Atlantic regional laboratory in the Delaware Basin. That most exciting event, the completion of the Delaware River Basin Compact, and the portent this holds for the development and utilization of the Basin's water resources, dictate that there is no more appropriate site in the Nation for

a regional research laboratory than one along the Delaware. It is to be hoped that every agency and interest concerned with the Delaware will support this selection. The establishment of a laboratory should be an early and highly significant achievement of the Delaware River Basin Commission.

It is apparent, however, that such a laboratory will have objectives and limitations such that it can not be the sole instrument of research required in the Basin. Rather, it should be the continued task of the Delaware River Basin Commission to undertake research in the pattern so well established by its precursors. This should include continued cooperation with and co-ordination of the multitude of agencies that deal with water resources, and encouragement and sponsorship of research and education at the colleges, universities and other research establishments. It should recognize that research in itself will be one of the most significant growth industries in the Basin.

Business and industry, as noted before, have contributed significantly to our knowledge of water resources. This contribution should be expanded in the future. As is so clearly indicated in the report of the Corps of Engineers, the water problems confronting us now and those of the future are most intimately associated with the forecasts of industrial development in the Basin. Without such development there indeed would be modest cause for concern.

Presumably the Water Resources Association of the Delaware River Basin is intended to be an important device, along with others, whereby the needs and recommendations of industry and of other local interests can be expressed in effective manner. Certainly an element that will bear upon the effectiveness of this instrument will be the precision with which the needs and recommendations are expressed. Clear

determinations must be based upon valid research and for everyone's well-being it is to be hoped that the conduct of research will not be left solely to the public agencies.

In brief, in the forum of the future where the utilization of the resources of the Delaware Basin will be established, it is to be expected that all those who seek the forum no matter what their interest or affiliation, will present claims based upon the surest knowledge that research can provide."

Question from Audience - "Does it mean the fact that labs be established near these universities would lead to a development whereby the university would receive grants to continue their work?"

Answer by Professor Jenkins - "Yes, I believe so. Presumably, the laboratory will be a special facility of the Public Health Service. Exactly how the cooperation with the higher learning will be carried out has not been specified in the legislation. It will involve a combination of grants providing facilities at the lab and consequently a whole spectrum of kinds of cooperation. This is a little different from many lab establishments made up to this point. This is the first time the legislature has specified that the lab will have some sort of association with institutions of higher education. In this regard, it is very different from most labs although many of these have certainly made all kinds of relationships with universities and other people interested in research."

Mr. Bensinger - "The Edie Company, among the nation's leading economists, does not predict a capital expenditure boom. What expense there will be of a capital nature will be on research. It may be that the Government sees a need for this."

Mr. Bensinger - "Our next speaker is Mr. William N. Kinnard, Executive Director of the City Parks Association of Philadelphia."

Mr. Kinnard - "The City Parks Association of Philadelphia is not a public organization. We are a private group, privately financed since 1878 and responsible for most of the recreational facilities in Southeastern Pennsylvania.

"In thinking about the functions which will be performed by the Delaware River Basin Commission, I am struck by an important fact. That fact is that for nearly every important function assigned to the Commission, there either is, or will be developed an organized special interest pressure group. The public utilities which might be affected by the activity of the Delaware River Basin Commission will certainly be sure that their interests are represented before the Commission at every opportunity. Municipalities and other groups concerned with flood control planning will do the same. Waterworks operations, both publicly and privately owned, will, through one or more associations, try, pretty much on a day-to-day basis, to influence the views of the Commission with respect to water supply. Industries which are heavy users will organize to present their views. Farmers will have their say with vigor whenever the question of water diversions for irrigation arises. Similarily, sportsmen will be heard from regularly.

"In fact I have probably just scratched the surface of the groups which will have permanet and full time professional public relations lobbying staff services to represent their interest before the Commission and its staff.

"In reciting these special interests, and in noting the vigor with which they will protect themselves, I do not mean to suggest anything

dishonorable, subversive, or undesirable about this. I recited the powerful influences on the Commission only to point out a contrast. The only special interest, which in a way is really a general interest, which will not be represented on a continuing basis before the Commission is the interest of parks and recreation. We could of course examine the reasons for this, but I do not wish to spend any of my 15 minutes here today on that interesting but actually subordinate point.

"Instead, I wish to emphasize that the lack of an aggressive, well financed, special interest group for parks and recreation creates a special duty and responsibility for the Commission members themselves. That special responsibility is to see that this aspect of the Commission's work is performed effectively and in the public interest. Unless the Commission remains resolute and determined to protect and develop the critically needed recreation and park facilities in the Delaware River Basin, we will have fewer parks per people as the population grows - and grow it will.

"Placing this Association's views in more precise terms, the City Parks Association of Philadelphia believes that the Tocks Island Dam on the Delaware River, upstream from Stroudsburg, Pennsylvania, should be developed with a large permanent pool for recreation purposes. The surrounding land should be a National Recreation Area.

"This Association first supported this proposal last July in a report now available to members of the Conference. I would like to remind you that the National Park Service has already stated, in one of the appendices of the Delaware River Basin Report, as follows:

> 'There are few, if any, regions in the United States that have greater need of additional recreation land and water space than the area that would be served by this Tocks Island project. There are few, if any, regions in the United States

that have a greater need for non-urban recreation water and land space and recreation facilities. Overcrowding and inadequate facilities have been the most often voiced complaints concerning non-urban recreation opportunities in the Basin and the principal deterrents to more extensive recreation enjoyment. Boating, fishing and camping opportunities are particularly lacking. Day-use facilities throughout the Basin are inadequate to meet visitor loads to existing areas.'

"Twenty million people reside within 75 miles of the 25,000 acre site of the proposed Tocks Island recreation area. Its creation as a great recreation center would help the sagging economy of Northeastern Pennsylvania. The area is well served by highways and will be even better served as the Federal roads program nears completion.

"This Association is mindful, of course, that there is always opposition by those few people injured in a part development for the greater good of large numbers of people. This often results in bitter and protracted political debate and controversy. To minimize this, in the case of the Tocks Island facility, we propose that as one of its first acts the Delaware River Basin Commission undertake a survey, with competent regional planners and economists doing the fact-finding to determine the economic benefit which the Tocks Island Recreation facility would bring to the upper Delaware River Basin. This Association believes the benefits would be substantial. The facts, however, should be established in a study which should take not more than 6 months to complete. Then the Commission should act without delay.

"The Syracuse University team which studied the Delaware River Basin some years ago said, 'The future of Delaware Valley recreation

presently looks dismal.'

"In the opinion of this Association, with the creation of the Delaware River Basin Commission, the recreation situation at last has better than a fighting chance.

"How good this chance is will rest largely with the Delaware River Basin Commission. As I have already said this Commission must be the voice, the conscience and fountainhead of action for open sapce and recreation in the Delaware River Valley.

"I hope and pray that it will."

Mr. Bensinger - "The next witness is Mr. Paul VanWegen, President of the Stony-Brook Millstone Watersheds Association. Mr. VanWegen."

Mr. VanWegen - "I would like to suggest that the observations of Mr. Wendell yesterday be placed in the records of the Commission. I think its impact is inescapable and I think you will agree."

Mr. VanWegen - "I am Paul VanWegen, President of the Stony Brook-Millstone Watersheds Association. The office of the Association is located at Marshalls Corner, Pennington, New Jersey. The Association is 12 years old and has for that period of time concerned itself with education, research and active programs in the field of natural resource management. Membership and support of the Association is completely voluntary and is composed of individuals, corporations, businesses, and municipalities.

"You are in the unique position of being able to do things in the Delaware Valley which will change its appearance forever. Forever is a long time, yet in ameasure, it conveys the degree of your responsibility to the people living or to live within this area. Our

experience in dealing with all natural resources on a watershed regional basis, in a 300 square mile area, leads us to make three observations we hope you will give weight to in reaching decisions necessary to the discharge of your responsibility.

"First: Evidence indicates that multipurpose non-governmental watershed associations can be of real assistance to the Commission in carrying out its obligations under the Compact. The mechanics for tapping this reservoir of experience would have to be worked out. We would like to suggest one way in which this could be done. A permanent advisory committee to the Commission from the Water Resources Association of the Delaware River Basin would assure that the varied and numerous interests - business, all types of citizen associations, professional and service organizations, etc., could know and be heard on specific programs or proposals.

"Similarly, a permanent advisory committee representing the watershed associations of the valley would assure the Compact Commission a source of valuable experience involving the development, conservation and management of the basin's natural resources. For, after all, watershed associations are experienced groups of technical and lay people who have been in the business of dealing with natural resources on a basin wide, broad scope basis. The watershed association advisory committee could also be the means of determining local opinion where alternatives are available and conversely, the channel for information to the people. As far as we know, there is no other valley in the whole country which has as many experienced all purpose watershed associations as the Delaware. This should not be lost to such an important body as the Compact Commission.

"The unique quality such watershed associations could bring to

the Commission would stem from their unique function. With objectivity and open minds, their job has been to seek the wisest solution to any resource problem and then to inform the people of the region concerning these findings. When one considers that membership in these associations is voluntary and made up of people living in the watershed, it would be difficult to over-emphasize the significance of the functions carried on by watershed associations.

"No one would challenge the theoretical contribution to efficiency through Governmental Commissions and Authorities. However, there is real danger to democratic institutions in these agencies becoming unresponsive to the will of the people and in a measure autocratic dictators even within the law.

"Without attempting to pass on the merits or demerits of the charges involved in the recent Port of New York Authority investigation, the investigation does demonstrate to a high degree the danger of remoteness from people and this is what I am warning about. If the Delaware River Basin Compact Commission is to avoid this pitfall, the mechanics of avoiding remoteness from people must be found and used. In a country which is becoming increasingly centralized this warning must assume even greater significance. It is not unreasonable to suggest that the experience of private multipurpose watershed associations can be of great service to the Commission in keeping its work and agency responsive to the people.

"Second: Our watershed and the Raritan River area are currently getting Delaware River water to the tune of upwards of 100 mgd via the Delaware and Raritan Canal. Even though New Jersey is developing additional surface supplies in the Raritan and our Association has taken the lead in the development of dams under the '566 program' on the

on the Stony Brook and Millstone River, we know from population projections the day will come when central and northern New Jersey will need additional supplies of this precious resource stuff which flows in the Delaware River. We would want you to consider this water need in your long-range planning.

"Third: I am among those who admire the work of the Army technicians in developing the plan of the basin and the craftsmen who have carved a rather unique compact. As important and necessary as both of these steps are, they must never be looked upon as ends in a democracy. Implementations of the plan and the functioning of the Commission under the Compact must be subject to constant review and study by the people of the basin. In recent weeks, the press reported great doubt that the U. S. Senate will approve the Compact this year. Why? Because the question of whether public agencies or private agencies should have a mandatory priority at developing the electrical power from the Tocks Island Dam has blocked action. It would be interesting to know if this is an issue any place but Washington.

"I would like to suggest that the people of the valley would have their own ideas on this issue and if they were given the opportunity to obtain the relevant facts, they would reach a sound decision. No matter how fine the plan, no matter how fine the Compact, there are areas in which the people of the valley should have the final say as between alternatives. If this is not done, democracy ceases to be a functioning institution. Certainly, this nation's democracy and institution of freedom are worthy of our most productive effort. All of the work which has been done and that which is proposed is for the <u>people</u> not for the agency of government, so it is both logical and in keeping with our democratic traditions that people should have a say. We commend these ideas for your consideration."

Mr. VanWegen - "My name is Paul VanWegen and I am presenting this statement on behalf of Penjerdel. Penjerdel has two objectives - first, to sponsor research at colleges and universities in the eleven-county region into the metropolitan or interjurisdictional problems of the region; and secondly, to publicize information about those problems to arouse public interest in them throughout the eleven counties. Penjerdel is initially financed by the Ford Foundation. The members of the Penjerdel corporation are individuals who have been designated by other non-profit citizen groups, such as colleges and universities, labor organizations, chambers of commerce, women's organizations, county-wide citizen groups, and so on. I am one of the members of the Penjerdel corporation and am making this statement at the request of the President of the corporation.

"The eleven counties in which Penjerdel is particularly interested comprise a substantial part of the Lower Delaware Basin. They are the five counties along the river in New Jersey - Mercer, Camden, Burlington, Gloucester, and Salem; the five counties in Pennsylvania - Bucks, Montgomery, Philadelphia, Chester, and Delaware; and New Castle County in Delaware. These eleven counties have recently experienced a very substantial growth in their population. In the 250 years from William Penn's time to 1940 the population of these eleven counties grew to three and one-half million people. In the following twenty years until 1960 the population grew by another one and one-half million persons or almost half again as much in twenty years as in the entire preceding 250 years. Various skilled observers have predicted that in the following twenty years, that is by 1980, this population, which now numbers about five million persons, will increase by three million more, making a total of eight million persons by 1980. It is generally

expected that this population will continue to increase, probably at an increasing rate of growth, in the years following 1980.

"The last 15 years have also brought a significant upsurge in economic activity, notably in the construction of many new industrial installations and commercial and service facilities of all kinds. There has been a 25 per cent increase in the number of households in the region since 1960 and a 28 per cent increase in the number of dwelling units. The effective buying power of individuals and households is about $400 above the national average.

"It should be obvious to anyone who thinks about the future of this region that this tremendous increase in population and economic activity is bound to require substantial additional amounts of water for residential, industrial and other consumption. In addition to an absolute increase in the quantity of water which will be needed, the continuing dispersal of residential communities and of industrial and commercial facilities over a very much wider area in the eleven counties will require greatly expanded systems for the distribution of water and may also require development of sources of water at a considerable distance from the main stem of the Delaware.

"In the light of the probable rapid and extensive increase in demand for water, there is growing concern in the eleven-county Penjerdel area as to the adequacy of upper basin storage facilities which are recognized as an essential element in the planning of the Basin if the flow of water in the Delaware is to be regulated for its maximum use.

"Penjerdel has not sponsored any research into the engineering, hydrologic or design details of this matter, nor into the required size of the needed facilities. That is to say, we have not investigated independently any particular program for the location of large storage

basins nor the relationship they should have to each other. We assume that this type of investigation has been thoroughly done by the Corps of Engineers and we do not offer here any comments or criticisms on the various recommendations which the Corps has made. We are quite convinced, however, of the fact that there will be a desperate need in the future for the water which can be provided only if a substantial system of storage basins is constructed. We are also aware of the possibly difficult aspect of the situation presented by the fact that some of these facilities may not be needed at once and yet provision for them must be promptly made against the later time when they will have to be constructed. In other words we are very much concerned about the early reservation of sites for these storage facilities so that when the need presses upon us for the water which these basins would make available it will be possible to construct the facilities at reasonable cost.

"We therefore particularly urge that consideration be given immediately to whatever problems are involved in the early reservation of these sites. We believe that it is most important to set these sites aside now so that other facilities such as highways, residential development or possibly industrial installations will not pre-empt them to the disadvantage of future water storage needs. We are greatly impressed with the fact that a large water storage basin can only be constructed in the place which is most suited naturally to its construction and that if the few available places well qualified by natural conditions are diverted to other uses it will not be possible in the future to create the storage systems which will surely be desperately needed at that time.

"We assume that the early reservation of sites would not mean

a complete withholding of them from other valuable public uses.

"Until the water storage facilities are actually constructed the sites might be used for recreation for the nearby residents or possibly as a forest reserve or even for a continuation of agricultural activity.

"It would be of interest to you, perhaps, to know that Penjerdel has sponsored research at the Law School of the University of Pennsylvania into some of the many legal problems involved in the reservation of land for low development uses such as water storage facilities while at the same time deferring the compensation which may constitutionally be payable to the owners. Naturally many legal questions are involved in such a combination of early reservation and deferred payment, but if these legal matters can be resolved, and the proposals of the scholars at the Law School who have been working on this matter lead us to hope that they can be resolved, this technique might be employed in reserving large sites now for future water storage development.

"In summary, on behalf of Penjerdel and the eleven-county region with which it is concerned, I urge the immediate planning and acquisition of all water storage sites which will be essential for the future industrial and commercial expansion of our region and the vast new residential development which will accompany it."

Mr. Bensinger - "Thank you very much for those thoughtful remarks."

Professor DeWiest - "In support of the remarks by Mr. VanWegen and of the local watersheds associations, I would like to point out that the Committee on Research of the A.S.C.E. (see reference before)

considers the hydrologic study of the small watersheds among the eight most needed subjects of research. A host of measurements on rainfall input and run-off output from small watersheds are available, but there is as yet no general theory to explain the course or mechanics of the flow from input to output."

Mr. Bensinger - "Our next speaker is Mr. Edward Miller, Executive Director of the Neshaminy Valley Watershed Association. Mr. Miller."

Mr. Miller - "The N.V.W.A. is a non-profit organization primarily concerned with the Neshaminy Creek and its 236 sq. miles of watershed in Bucks and Montgomery Counties, which drains into the Delaware River below Bristol, Penna. Our major purposes are based on the protection and development of the natural resources in our valley.

"On March 29, 1961, we submitted a statement to the Pennsylvania Senate strongly endorsing the principles embodied in the proposed Federal-State Compact Bill, S.B. 350. Now that state and federal legislation has been passed providing for the creation of an interstate-federal commission, we wish to offer our support to the commission-to-be by endorsement of the principles in the new compact.

"When a procedural work plan is developed by the Commission it is our hope that it will include a thorough study and analysis of the water supply needs in the tributory watershed areas of the Delaware River Basin prior to any project undertaking. Flood control, pollution abatement, stream flow augmentation, recreation, and wild-life aspects should logically be included in such studies. As the commission's objectives will be founded on multipurpose development, its program should be broad in scope.

"Also, we urge the commission to assume a major role in instigating, planning and co-ordinating flood plain studies in cooperation with the U.S. Army Corps of Engineers, the four basin states, and local governing and planning bodies within the states. Investments in flood protection and flood control works by Federal, State and local agencies will be greatly enhanced by proper flood plain regulations enacted at the local level and based on sound engineering and hydrologic data.

"The magnitude of the job that lies ahead of the commission could lessen its efficiency and effectiveness; or result in its concentration on one or two phases of the Delaware River Basin's resource development. We, therefore, urge the commission-to-be to utilize, to the fullest extent, the services and facilities of all existing agencies concerned with the natural resources of the Delaware. A co-ordinated effort beginning at the local level will be a major factor in attaining the wisest use of our natural resources for everyone.

"The Neshaminy Valley Watershed Association will do all it can to help achieve these ends."

Mr. Bensinger - "If the weight of preponderance has anything to do, we are in."

Mr. Bensinger - "Our next witness will be Mr. Paul Felton, Executive Director of the Wissahickon Valley Watershed Association. Mr. Felton."

Mr. Felton - "After years of exhaustive effort and action on the part of conservation agencies, both federal and state, it is pretty well agreed that in the Delaware River Basin we are <u>not</u> doing the conservation job fast enough. We are not planting trees on idle land fast enough;

we are not putting our forests under intensive management fast enough; our small streams become more polluted in the megalopolis area where, for instance, in the Wissahickon Creek's Sandy Run tributary we will soon have 5 to 6 times as much effluent water as natural stream flow, reservation of open space has been practically unheard of and the increase of recreational parks has been exceedingly slow due to lack of funds.

"In looking for the reason why the conservation job is not progressing faster, many of us see lack of public support as the main villain. Not enough local groups and landowners have been sold a bill of goods to actively support resource conservation programs.

"If the D.R.B.C. is to succeed in its fabulously diverse program it must have the active support of a high percentage of the millions of residents in the basin. It will only be through a dynamic information and education program which will reach the grass roots that the commission will be able to get the job done.

"The D.R.B.C. must, as quickly as possible, develop an Information and Education organization which will be in constant contact with the many local organizations throughout the 12,000 square mile basin. These small groups are the true hard core of public support and will need advice, encouragement, the latest information and other help in stimulating their growth, activity and effectiveness.

"An active I. & E. organization with adequate field representatives to meet the public in its own backyard is our suggestion for a successful commission and the ultimate objective - that of getting resource conservation on the land."

Mr. Felton - "The Montgomery County Advisory Committee to the National Rivers and Harbors Congress is made up of 13 prominent

men and women of widely diversified backgrounds who were organized to explore the local water problems and charged with advising Representative Richard S. Schweiker on such matters.

"This group advised Mr. Schweiker to support the Delaware River Compact. His maiden speech in the House of Representatives was significantly in support of this Compact.

"Although every one of the 10 major areas of interest in the Compact were keenly discussed by this advisory group, it was felt that the item given the lowest priority on the list, the last category - Public Education and information programs, has the greatest possibility of making or breaking the Commission's entire program.

"The Committee is hopeful that an adequate Public Relations organization will develop to co-ordinate the information and education programs which will be so necessary for an effective commission. The public must be informed of the actual work of the D.R.B.C.

"The committee would like to take this opportunity to point out the importance of the job which Frank Dressler and the Water Resources Association have done in sifting through the mountain of information published on the compact and the Corps' report to digest it into a form which the average citizen can understand. We publicly commend the W.R.A. and Frank with the hope that the work will continue."

Mr. Bensinger - "These are the things we hope the Commission will get done."

Mr. Bensinger - "We will now hear from Mr. William Roach of the Somerset County Planning Board, Somerset, New Jersey. Mr. Roach."

Mr. Roach - "In looking over this agenda, few spokesmen represent public non-profit agencies. I am from a county not within

the basin. While Somerset County is not in the basin, we have definite ties with the basin. Our ties are through the Delaware Canal for 16½ miles.

"The Regional Planning Association has projected the greatest rate of population growth to our county - a 282% increase by 1985 - or an additional 406,000 population. We have a very real interest in the Delaware River project....by the implementation at the earliest opportunity of the Tocks Island Reservoir to provide water facilities which Somerset County cannot provide.

"Our economic resources are limited and we have a lack of natural resources. We are interested in the result which Tocks Island will supply to our area via the Canal and the Round Valley Project. We are directly interested in the proposed hydroelectric power by private utility companies. We need additional recreation areas....additional water supply....additional electric power. We urge the early designation of additional reservoir sites, as well as other facets as set forth in the report."

Mr. Bensinger - "Our next witness will be Mr. S. Logan Kerr, speaking as an individual consulting engineer. Mr. Kerr."

Mr. Kerr - "As a resident of Pennsylvania, and more particularly of Whitemarsh Township, and a property owner on one of the tributary creeks to the Delaware River, I have been most interested to be present at this and other meetings held in the interest of the Water Resources of the Delaware River Valley.

"Several key policies have been proposed by organizations that should be given the highest priority by this new commission. A short summary of them would seem in order at this time:

1. Formost among the proposals is the requirement that existing organizations in the Delaware River Watershed should be used to the utmost.
2. That new and competing organizations should not be setup for purposes already being accomplished by local governmental, local area or local technical organizations.
3. That local political or geographical organizations should be consulted and encouraged to carry out 'do it yourself' programs wherever possible.
4. That 'local option' be a basic policy as contrasted to Federal dictatorship. Colonel Setliffe has suggested we look on the Report as our Report - Let us keep this attitude also for the future.
5. Utilize existing hydraulic soils and other laboratories to the fullest extent - a survey of such facilities in the Delaware Valley would show that excellent laboratores and staff for such research are available at many local universities.
6. While mention has been made of:
   (a) Planning
   (b) Construction
   (c) Regulatory Functions
   (d) Financing

"No mention has been made as to engineering and design work and how this is to be handled.

"Again, local resources of talent are available and should be utilized to the maximum extent.

7. May I suggest that one of the first acts of the commission

be to make an inventory of local talent - and include:

(a) Local civic organizations

(b) Local governmental planning groups

(c) Local Water Supply facilities - both public and private

(d) Local research and laboratory organizations and staff

(e) Local engineering organizations in the Water Supply field who can carry out the planning and design of projects.

8. Water Supply - domestic and industrial must take precedence over other aspects of the 'PLAN' --for without adequate water supply, there can be no life, and without life, there can be no recreation, no one to catch fish, no industry. Flood control and Navigation become academic phrases.

9. Finally, let us continue to have our 'annual meeting'; let INCODEL, Water Resources Association and others form a nucleus that will make this possible."

Mr. Bensinger - "I see by the agenda that I am now scheduled to don my other hat as President of the Water Resources Association to make a statement on behalf of the Association.

"I must confess that I was somewhat tempted this morning to make this statement as soon as I had explained the ground rules for today's session. I was afraid if I had, however, that I might appear to be trying to steal someone's thunder, to speak about ideas that I knew would come to the fore later in the day.

"As this session has turned out, I'm glad I decided to wait until now before making the statement. In the brief statement that I shall begin in a moment, you'll see that I do mention many of the ideas that have been developed here by the able speakers. This is hardly unusual since many of today's speakers are members of the Association and we try to keep closely abreast of the problems, needs and desires

of all of our members.

"As I'm sure many of you know, the Association is a basin-wide federation of non-profit organizations and individuals. As the only basin-wide organization devoted to the development and control of the Delaware's water resources, it's inevitable that the Association will have to forcefully deal with the ideas developed today both before the public and the new Commission. In that respect, it's probably appropriate that I be somewhat repititious.

"Since the Association is a federation with members scattered throughout the four basin States, its membership meetings are fairly infrequent, usually one per year. I mention this since the activities that I'm going to urge upon the new Commission represent the thinking not of the entire Association but of several of the Association's officers and its staff. These will be by no means the only ideas the Association expects to deal with in the coming years, and they will be presented in skeletal form only since so many of the ideas have been developed fully in the course of the day.

"Since you've heard me throughout the day I shall limit this statement to an examination of just the first question, that is: What would we like to see the new Commission do?

"As far as fairly immediate action is concerned.....

.....We strongly believe that the new Commission must start acting as soon as possible to assure the construction of those physical facilities the Army Engineers say should be built between now and 1975.

.....We believe that as soon as possible, the Commission must act to reserve future reservoir sites. Of the fifty-eight sites in the Army's comprehensive plan, two (the Newtown and Hawk Mountain sites) are probably already lost.

.....We believe that as soon as possible the Commission must inaugurate a program of planning and technical aid to promote flood plain regulation. This is a sensible and practical method of reducing flood damages, particularly in those suburban areas that are bearing the brunt of the population explosition.

.....We believe that in the near future the Commission must dispel lingering doubts by re-evaluating the water needs of the State of Delaware and then by implementing a practical plan of action to meet these needs.

.....We believe that the Commission must build upon and expand the existing excellent water quality control programs. We must not forget that the Army's plan is based on the assumption that the water quality of the Delaware will not deteriorate in the future.

.....We believe that the new Commission must assist the Commonwealth of Pennsylvania and Chester County in every way feasible to implement the Brandywine Water Supply and Flood Control Plan. We also believe that the Commission should extend similar assistance to help implement the Wissahickon Valley Watershed Association's local flood control plan.

"These are a few of the action programs that we believe the new Commission should embark upon soon after it is organized. We also believe, however, that many short and long-range research programs will be essential for the success of the DRBC. For example,

.....We believe the Commission should, through studies, develop improved methods of relocating people out of areas that are to be permanently flooded.

.....We believe that the Commission should make a comprehensive

study of the economic impact of reservoirs and recreation areas.

.....This Basin has large supplies of brackish waters, enough we believe to more than justify research into methods of converting these waters into fresh water.

.....We believe that it will be absolutely essential for the new Commission to make ground water research studies of all kinds.

.....We also believe that it will be absolutely essential that the new Commission make research studies that will lead to ways of dealing with new pollutants.

.....Finally, we believe that it will be essential for the new Commission to make projections of water use for key areas of the Basin, especially those areas that now are bearing the brunt of the population explosition.

"This list of proposed research activities, like the action programs previously mentioned, is by no means all-inclusive.

"This completes my task as President of the Water Resources Association so I shall now don my other hat and continue as Chairman of today's program.

"You'll recall that this morning I said that if any of you in the audience had statements or comments you'd like to make you'd be given the opportunity to make them this afternoon. If you'd like to make a statement, or perhaps even ask a question or two, won't you please come forward."

Mr. Bensinger - "Our last speaker for the afternoon is Mayor George Smith of Easton, Pennsylvania. Mayor Smith."

Mayor Smith - "It is with a sigh of relief that I am the last speaker. Maybe the thought that I give you is the one you will leave

this place with.

"Every once in a while a natural occurs. Look at the position of this hotel. This is a natural position. And today, I have another natural to present to you. I, as Mayor of Easton, am extending an invitation for the consideration of the City of Easton as the logical, best, most economical place to put the Commission. Look at the map. This is the Delaware River Basin (indicated). Look at Easton. It is the center of the area where you are going to do your construction. Remember, your Commission will be interested in engineers' reports, financial studies, all of the things that will go with the construction of these dams. It will be able to contact local contractors. This position is ideal for construction.

"You might say....'that is O.K., but how about accessibility'. This is the ideal situation! We are an equal distance from New York and Philadelphia. We are one hour from Washington, D.C. by plane. Fine airport. Only one hour from Trenton. Two hours from Wilmington. We are in an ideal place to serve this Commission.

"Do we have the facilities? We do. You think of Easton as a small place. We are part of a metropolitan area of 500,000. Ample parking space....low rentals.....adequate hotel rooms. This particular location is ideally suited, but it would mean the decentralization of thinking of large metropolitan areas. It would give it a prestige that a large city would not give.

"Eventually, you are going to appeal to local government to foot the bill. What better place could you have to be in with the grass roots.

"Lehigh University is only twelve mile from Easton. Princeton University is only 35 mile from Easton, with the possibility that this

laboratory could be there also.

"Gentlemen, I hope when you leave here you will carry this thought. This is a natural. As long as I am in office in Easton, I guarantee you that our government will bend over backward to give this Commission every possible help that we can."

Mr. Bensinger - "I guess we better grant equal time to Mayors Wagner and Dilworth."

Mr. Bensinger - "Are there any comments from the gentlemen at the front table?"

Colonel Setliffe - "Unlike Dr. Smith I'm neither peddling pills nor politics but I am peddling engineering --just a little bit.

"One speaker mentioned the need for a survey for the recreational potential on Tocks Island --the fact that it will take six months to make a survey presumably to determine the recreation potential of the area. We're talking about a project having a cost of 122 million dollars.

"One of the project purposes is recreation. The amount for recreation allocated to recreation is 47½% of the total, almost half for a lake over 30 miles long and extending up to just short of Port Jervis, New York. The cost is over 50 million dollars and if the recreation benefits did not exceed those costs, recreation as a project purpose would not be in this project. There's no doubt in the world there is a recreational benefit expected from the project and it will be much in excess of the cost. I think that is pertinent. It's pertinent to the activities of many people who don't see a lot of need to wait on the formalization of the Commission, on the formal acceptance of the Tocks Island as a formal authorization of Tocks Island to the project to get it

on the road. It is unquestionably a 122 million dollar part of the 590 million dollar program.

"Point 2. Recommendation in the comments made frequently by many people here on the need for grass roots attention. People at the grass roots doing the job. I think Hal summed it up very well. I suggest that decentralization in a project of this kind has to be a must. The Corps of Engineers particularly considers decentralization a great necessity. I think many of the other federal agencies do, else Shorty Watson and Brin Martin would not be around with tremendous latitudes to do things and most of us have bosses. I think most of you have seen my boss, General Lipscomb, and his philosophy is I think, the same as Shorty's boss and these other people ---look there's a lot of work to get out here and the only time you're going to get in trouble is when you don't do it. So decentralization theme I think, has to be here. There is just no question about it. That the 'Lord helps those who help themselves' is a must.

"The requirement mentioned by Mr. Felton for public relations. I don't think there's any question about it. So many of us do these things intuitively. I suggest, that the Commission's, one of its prime public relations purposes, must be accomplished through a medium not directly associated with the Commission because there are so many people who are going to say....'these people are peddling this thought for a purpose'. I suggest that you look into the background of your own Water Resources Association and if you look into the activities of that Association and, as you will recall, that we're speaking of a need for a forum to hold together the talents in this room and suggest maybe your prime public relations, a public tested organization already is in existence and is already doing a grass roots support job for the

Commission.

"Incidentally, I think this Commission is a wonderful thing even though it doesn't exist yet. We have been talking to it, we have been selling it places to live, we have been telling it what it ought to do. It's a delightful creation.

"I would like to respond a bit to Mr. Logan Kerr's comment on the engineering aspects. So far as the Corps of Engineers is concerned, I think it is well to point out here that we have in the Corps of Engineers a certain IN-HOUSE capability. We can design things ourselves. We try to as far as our money will support it. We try to maintain the capabilities in the Corps of Engineers to do our own design. We have electrical people; we have hydrologists; we have people that can handle almost any engineering project. And when the money is short and there are a few projects it behooves us to do this because why? Those are the training grounds, the training projects which enable us our our work expands, to clearly define to the industry our requirements to assist them in defining what we need and to work with them in supervising and co-ordinating the effort which the engineering industry accomplished for us.

"Now, there is no doubt in the world that any of those of you who attended engineers' conferences, I know that you've heard the expression of the 'Corps of Engineers - Industry Team'. 'It's a must, it's a natural, it has to be'. Every time we get in trouble, and just by in trouble, I mean too short a time, and not enough money and not knowing exactly what's wanted, it has to be done yesterday, we immediately call in the engineering profession and they bail us out. They have to. They have done it all along and they will in the future.

I suggest there is tremendous engineering talent available. I am among those who say 'Thank God for the engineers in the Delaware Valley'. They have a wonderful profession, wonderful capabilities and Mr. Kerr I think is a good example. There are many others here. Mr. Friel I know is a good example. He's one of these people that run A.S.C.E. A tremendous organization. You've got engineering talent. You've got just any talent you want to make the Delaware River Basin what you want it to be and I think, we would say that that's our Basin."

Mr. Pitkin - "I might, just to round out the picture, comment briefly on the suggestion made repeatedly that among the resources of the Basin which we want to conserve is the body of knowledge built up within INCODEL, in the minds of our staff, in our files and in the programs actually underway.

"Actually it was decided that in order that none of the resources be lost sight of that we would, inside of the next month or two, develop a rather detailed report covering the things underway in the INCODEL office and the information resources in our quarter of a century operation. This will go through channels and ultimately reach the members of the Commission which we have been talking about. We must be sure there are no unnecessary losses of valuables in this period of transition."

Mr. Robin - "As far as I am concerned, your case is made and won."

Mr. Ford - "In view of the area of talent appearing here today, it is hardly necessary to add anything to what has been said.

"Dr. Patrick this morning spoke to you of the various affects

that might result in the River as a result of the improvements. The Delaware River is a living organism. We are going to change it for the better. We must be aware of the fact that in making these changes some people are going to be affected in an adverse manner. I cannot emphasize enough the need to setup a program for baseline information. This is very important. After you have made these changes, we cannot go back and find out why we made the changes. Without the baseline information, you cannot really determine where you are going. Also, I think it is very important to take advantage of this grass roots support. It is very encouraging and inspiring to see the support on the grass roots level by the people who have been dealing with this problem over the years. I think this will have a successful end with the kind of support that your organization has been able to give up to now. This plan is an excellent beginning. I commend to you the thought that everyone ought to familarize themselves with the study of the Delaware. It is of tremendous value. I believe the Delaware River Commission can do no better than to start off with the Army Plan as a basic framework to develop this Plan for the Delaware River Basin."

Mr. Thompson - "I would like to say this. I have noticed in the course of the talks that they seem to lay a tremendous emphasis on the fact that a lot of this benefit is going to inure primarily to New Jersey and Pennsylvania. However, I want to assure everybody, as far as New York state is concerned, we have been in this from the beginning and will do anything to make it effective.

"This emphasis on grass roots.....I am in favor of it. We must have it. I would like to make one cautionary note. The new Commission will have a tremendous public relations job to do first. Grass roots support should be made on current information and the only

way current information can get to the Commission is through the grass roots. Many times decisions at grass roots level are made on emotions, not necessarily on facts. The new Commission should try to reach the people with all of the facts.

"There has been a lot of information in connection with the acquisition of sites. That is something which I think should be done as quickly as possible, but first, serious consideration should be given to the definite plan for building something on the sites which you propose to acquire before you go into the acquisition. I hate to see sites purchased becuase a reservoir will be built in this area and then it does not happen. The fact that the land is under acquisition can put a cloud on the title of that land and the seller may very well find that sometime in the future that site will not be as nearly attractive as it might have been. He has given away a birthright for far less than he would have thirty-five years from now.

"Those are just some notes of warning."

Mr. Bensinger - "In relation to Federal Highways programs, the mere threat of condemnation devalues the value of selling price of that land quite substantially. This business of guessing is a real detriment to the land, not only to the owner but taxes to local government where everybody is scared to do anything on that piece of land. The Commission will have to take into consideration definite plans one way or the other."

Mr. Bensinger - "If there are no further comments, the meeting now stands adjourned."

WRITTEN STATEMENTS SUBMITTED FOR RECORD

The following three written statements were submitted for the record prior to the meeting.

1. Statement of William L. Shafer, Legislative Chairman
Orange County Federation of Sportsmens Clubs

"The Orange County Federation of Sportsmen's Clubs, Inc. and the New York State Conservation Council, Inc., realize that the population explosion of the last few years is one of the most astonishing trends of our times. Equally astonishing is the trend of Americans to the Outdoors. Outdoor Recreation is a balance wheel, a fine safety valve for the pressures we all face today.

"Relaxation in the outdoors is no longer a luxury, its a necessity if we are to more than merely exist, our American way of life is based on more than mere survival and we feel that Recreation should get a better break, especially in this age when multiple use is an accepted concept in Water Resource Development and we would also like to see a better job done by the Recreational Planner who must consider Recreation in the planning stage when the other engineering data is being worked up and not after the Reservoirs is built.

"Actually we should start even before that when land is being acquired. The Conventional uniform margin of 500 to 1000 feet is not always enough when a campsite or a picnic spot is being considered.

"It is surprising that a simple but vital facility like a parking area is often overlooked until the Reservoir has been completed and its too late or too costly to make satisfactory changes because of the very nature of water, based recreation people come by car with a picnic basket, a fishing rod or a boat.

"All too often no parking places have been planned - people park along the main highway and become a dangerous traffic hazard. The Recreational Planner should have these parking areas spotted on his work plan, often terracing is needed which can be done best during the excavation period.

"The steep banks of a Reservoir near the dam often need serpentine like roads using the Railroad switchback principle, to lead to the waters edge.

"Boats - launching ramps are practical installations and should be spotted and planned in the blue print stage so they can be constructed before the Reservoir fills.

"Picnic areas and campsites like parking areas need relatively level ground, such areas can be built properly on during the excavation period when it is relatively easy to level off a suitable site.

"Fishing piers extending out into the Reservoirs are also practical installations should be on the Reservoir blue print. If certain species of fish are in the stream below the dam, fish ladders to get the fish up into the Reservoirs must be designed in advance and also facilities for returning them, because here too what goes up must come down and we would like to have these finny little fellows all in one piece.

"Water fowl should be included in the hunting opportunities of the project and some planning should be made for a satisfactory combination of points, coves and properly located duck blinds.

"For maximum fish production, shoal areas are needed for spawning and to produce fish food. Here it is absolutely necessary that these areas be built before the Reservoirs fill.

"We recommend all these things should be in the work plan. Controlled flows below Reservoirs to protect fish life are an accepted

Reservoir Management measure today but special valves, pipe gates in the outlet chambermay be needed to take care of these conservation flows.

"The recommendations of the Orange County Federation of Sportsmen's Clubs, Inc., and the New York State Conservation Council, Inc., are as follows:

1. Recreation must be considered during planning stage, not after a reservoir is finished.
2. Recreation must provide a detailed blue print of areas and facilities similar to the work drawings of the engineer.
3. Recreation must provide a unified overall administrative command to plan all aspects of recreation in the same way as the engineer and his staff.
4. The cost of underwriting the construction of recreational facilities must be determined in the very beginning of project planning.

"If these recommendations meets with the approval of the Commission the value of recreation in our opinion will not be overlooked in the future."

2. Statement of New Jersey Manufacturers Association

"The creation of a new Delaware River Basin Commission by the Interstate-Federal Compact now awaiting the signature of the President is a milestone in the histories of the river basin and the states of New Jersey, Pennsylvania, Delaware and New York. Not since George Washington crossed the Delaware to capture Trenton in the Revolutionary War has this waterway assumed such an important role in the future of the four-state area.

"In the studies, deliberations and discussions which led to the

drafting of the compact and the plotting of engineering and construction project to 'tame and tap' the Delaware, much emphasis has been placed on the multiple purposes of the undertaking--flood control, recreation, conservation, water supply, pollution abatement, etc. Running as an undertone through all of these phases of the proposal has been still another factor. This is the fact that the projects, policies and programs of the future Delaware River Basin Commission will have a significant effect on the economic growth of the entire basin and in particular on the states of New Jersey and Pennsylvania. It is this economic undertone that we believe must be given emphasis in all of the future plans for development of basin projects.

"Of the 21 million citizens residing in the basin area, a vast majority depend upon private enterprise for their livelihood. Thus industrial growth must parallel population growth if the area's citizens are to continue to prosper and enjoy the advantages of the nation's economic progress. The fact that substantial unemployment exists in certain sectors of the basin gives added emphasis to the need for stimulating the area's economic growth.

"What effect can a water control project have on economic growth? There are, of course, many obvious answers to such a question. The first being that proper conservation, development and utilization of an area's natural resources are prerequisites to insuring the economic stability of any region. There are, however, other not so obvious influences with which the future commissions will be dealing.

"While we will undoubtedly be discussing these subjects in detail as the various development stages become more specific, we wish to point out a few by way of illustration.

"One of these involves the question of riparian rights now held by a number of major water-using industries along the Delaware and its

tributaries. These companies have based their production and employment upon certain traditional water withdrawal and usage rights. Care must be taken to avoid water use charges that would tend to place these industries at a competitive disadvantage with companies in other areas. The competition for industry and jobs between geographical areas has never been keener.

"Another involves the much debated question of public vs. private development of whatever electricity potential is a by-product of the major dam construction. If funds for this construction are provided by the federal government, this vital decision which affects the futures of all of us will be made at the federal level. Nevertheless, basin sentiment on the subject will have an important bearing on the final determination. In bringing up this controversial point under the heading of economic growth, we do so because of the significant contributions to the growth of the region made by the area's progressively managed, privately-owned electric companies. Not only have these companies fulfilled their obligation to provide a full range of dependable power and service at a competitive cost, but they have also been in the forefront of efforts to attract employment and industries to the regions they serve. To enact a so-called public power priority would detract from the ability of the area's private companies to continue to provide the service and growth the area needs.

"If the federal-state partnership proposed under the compact can lead to the taming of the Delaware and its full development as a natural resource and at the same time enhance the economic growth of the region, it will have been an accomplishment worthy of a place in history alongside Washington's historic crossing at Trenton."

3. Letter-Petition of Mr. Wellington Lester of Equinunk, Pennsylvania

Equinunk, Penna.
August 31, 1961

Frank W. Dressler, Executive Director
Water Resources Association-DRB
948 Suburban Station Bldg.
Philadelphia 3, Penna.

Dear Sir:

"Thank you for the Alerting Bulletin #10 that describes the conference at Pocono Manor on September 19th.

"I would like to bring this matter to the meeting in person, however, other duties do not permit my attending. Therefore, I am asking you to do whatever you have the power to do in this problem.

"There is a situation in Buckingham Township, Wayne County which I feel should be considered in the overall plan of flood control and protection of property from unchecked waterways.

"I am referring to Lake Charlotte, formerly known as Adams Lake. A creek drains this lake and flows into the Delaware River at Equinunk. The gentleman who did most of the planning for this lake died one year ago this month. To the best of my knowledge no one acting in an official or responsible manner looks after this property.

"Enclosed are two photographs which I have numbered. Number one shows quite clearly the erosion that is taking place on the lower side of the spillway. Number two shows a large crack on the butment of the dam near the spillway and in the background you see the shore line where trees are dying due to the water that has backed up around them.

"My question is this! What are the possibilities of making this area into a dry dam for flood control? We in Equinunk suffered considerable damages from the floods of 1936, 1942 and 1955. There is also fear in the hearts of many every time we have a prolonged rainstorm because of the terrific amount of water that is impounded in this area. We might say, 'water is hanging over our heads.'

"I would be happy to meet you in Equinunk any time at your convenience and show you the area described.

"Your interest in this matter in our behalf will be greatly appreciated."

Also included with statement of Mr. Wellington Lester was the following:

"We as property owners along the creek that drains into the Delaware River, do concur in this concern."

This statement was personally signed by:

Elmer Fletcher

Mrs. Elmer Fletcher

Victor Cappellazzi

Rose Cappellazzi

Eunice H. Vetter

J. S. Warfield

Laura E. Warfield

Helen F. Lester

Charlotte Billings

Frank Eldred

Gertrude Eldred

Sheldon Houghtaling

Edith Houghtaling

Edward R. Vetter

Arthur Billings



(1)



(2)

Photographs #1 and #2 enclosed with letter of Mr. Wellington Lester.

DIVISION OF STATE & REGIONAL PLANNING
30 SOUTH MONTGOMERY STREET
TRENTON 25, N. J.