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DELAWARE RIVER BASIN
CONSERVATION CONFERENCE

Proceedings

BELLEVUE — STRATFORD HOTEL
Philadelphia, Pa.

January 15, 1948

Sponsored by
INTERSTATE COMMISSION ON THE DELAWARE
RIVER BASIN (INCODEL)

Program

Morning Session

Hon. Orus J. Matthews, Secretary, Pennsylvania Department of Commerce and Chairman of Pennsylvania Commission on Interstate Cooperation, presiding.

10:30 A. M. to 10:40 A. M.—Address of Welcome.

Hon. Bernard Samuel, Mayor of Philadelphia.

10:40 A. M. to 11:00 A. M.—What Incodel's Program Means to the Nation.

Hon. Robert C. Hendrickson, State Treasurer of New Jersey and Member of Incodel.

11:00 A. M. to 11:15 A. M.—Progress of Port and Transportation Survey—Lower Delaware River Basin.

Major General Harry B. Vaughan, Jr., Port Survey Engineer, Delaware River Joint Commission.

11:15 A. M. to 11:35 A. M.—Where Are Our Ground Waters Going?

Mr. Jack B. Graham, Geologist, United States Geological Survey.

11:35 A. M. to 12:00 Noon—General Discussion.

Luncheon

12:30 P. M. to 2:00 P. M.

Address

Conservation—America's Most Basic Problem.

Hon. Franklin H. Lichtenwalter, U. S. Congressman, Bucks and Lehigh Counties, Pa.

Afternoon Session

Hon. Floyd E. Anderson, State Senator, New York, and Member of Incodel, presiding.

2:30 P. M. to 2:50 P. M.—Status of Schuylkill River Restoration Project.

Commander E. S. McCauley, U.S.N. (retired), Deputy for Hon. Milo F. Draemel, Secretary, Pennsylvania Department of Forests and Waters.

2:50 P. M. to 3:10 P. M.—The Low-down on the Slow-down in Soil Conservation.

Mr. Robert A. Harrier, Managing Director, Lehigh Valley Flood Control Council, Bethlehem, Pa.

3:10 P. M. to 3:30 P. M.—Incodel's Interest in the National Water Conservation Conference.

Judge Clifford H. Stone, Director, Colorado Water Conservation Board and National Water Conservation Conference, Denver, Colorado.

3:30 P. M. to 4:00 P. M.—General Discussion.

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DELAWARE RIVER BASIN CONSERVATION CONFERENCE

ADDRESS OF WELCOME

HON. BERNARD SAMUEL, MAYOR OF PHILADELPHIA
Bellevue Stratford Hotel, Philadelphia
January 15, 1948

I was very much pleased to accept the invitation to attend this Conservation Conference of the Interstate Commission on the Delaware River Basin which opens this morning.

Mr. Allen, the Executive Secretary of the Commission, has requested me to open the meeting and suggested that I comment on the constructive steps which are being taken by the City of Philadelphia embraced in the sewage collection and treatment projects, its water works rehabilitation program, and other matters of interest to those here assembled.

I extend cordial greetings and a hearty welcome to the delegates attending the conference and am very much pleased with the interest you are taking in the City's program for expansion and betterment.

As late as last week, I transmitted to City Council the recommended program of the Philadelphia City Planning Commission for Public Improvements for the years 1948 to 1953, inclusive.

This 6-year program is important because many basic needs of the City will be met - - cleaner rivers, better water, expanded hospital facilities and sewage treatment construction.

Five distinct needs of the City for sewers and sewage treatment are to be met by construction for which projects are included in the program. These needs are:

Sewers to serve new homes and other buildings to be constructed;

Sewers for buildings now dependent on cesspools and temporary drains;

Reconstruction of old sewers;

Completion of collectors to intercept the sewage now discharged directly into the rivers and to convey it to sewage-treatment works;

Construction of plants to treat the sewage;

Storm flood relief and drainage.

It is so obvious that the construction of new sewers must go forward with City development that this part of the sewerage program requires no explanation.

Probably it is not so obvious that development in some parts of Philadelphia, notably the northeast, previously outstripped the extension of the sewerage system, and the sewage in these areas is discharged into cesspools and temporary drains.

Disposal of sewage by such expedients is unsanitary, creates conditions of nuisance, and must be discontinued as soon as possible. Projects are included in the program to relieve this situation.

Some of Philadelphia's sewers, because of their great age and the strains placed on them by modern conditions, are in a precarious state; some have collapsed, others are in danger of collapsing.

It was necessary to include projects in the program for the reconstruction of these old sewers.

A very large proportion of the sewerage program is directed toward treatment of all the sewage of the City and of adjacent communities which discharge their sewage into the City's system and pay the City for the privilege.

This is a tremendous undertaking which has been increased in cost by rising prices of labor and materials.

However, it is necessary in order to abate pollution of the rivers and

reduce the danger of contamination reaching that part of the City's water supply taken from the Delaware.

There will be three treatment plants to meet the City's needs: one in the Northeast; a second in the Southeast; and a third in the Southwest.

Of these, the Northeast plant will be completed first because of its importance in safeguarding the City's water supply.

Sewers are scheduled for construction to supplement and relieve sewers which now overflow and cause flooding of property because they are not large enough to carry off the water of heavy storms.

A definite policy has been adopted for improvement of the water supply, namely, that the rehabilitation of the present system will be continued.

Projects scheduled in the 1948-1953 program are directed toward completing the work that has already been started in accordance with this decision.

The policy was adopted after thoroughgoing discussion and careful consideration of the final report submitted by the Commission appointed by me in 1945 to study the water-supply situation and advise the City.

In the Water Commission's report, the improvements now under way were recommended as a first step in a long range program of which the second step would be the development of a new water supply to be taken from the Delaware River at Wallpack Bend near Bushkill, Pennsylvania.

Whether or not the second step will be taken will depend on the quality of water produced by the first step.

As the second step may be necessary, the Water Commission recommended that the City take immediate action to preempt the Wallpack Bend site, and such action has been initiated.

An adequate supply of healthful, palatable water is a primary need of a city. The 6-year program of improvements will meet this need by modernizing

and strengthening the pumping and filtration plants, eliminating tastes and odors, and reinforcing and extending the distribution system so that water at adequate pressure will be provided in all parts of the City.

It includes the installation of water mains to serve new homes and other buildings as they are erected.

Our plans call for the development of our port.

Our two great rivers are in the process of being cleaned up and the Delaware River Joint Commission is taking, under recent legislation, an active part in the preparation of plans for improving the Philadelphia port.

The superstructure of Pier 80 at Snyder Avenue is in the course of construction at a cost of $3,000,000. The pier is being built upon foundations completed before the war but which will be widened.

A contract for extensions to the sub-structure was awarded during 1947 calling for an expenditure of $400,000.

Work on this pier, which will be the finest of its kind in the world, will be rushed to completion.

In conclusion, I assure you that the City of Philadelphia, of which I have the honor to be the chief executive, will soon take its rightful place as a leading world municipality, supported by a historical background unsurpassed by any other metropolis in the nation.

Our program calls for the expenditure of about $322,000,000., and when completed the "birthplace of liberty", the "City of Homes" and the "Workshop of the World" will be a bigger, better and brighter place in which to live and carry on the pursuits of every-day life.

I know your deliberations will be most interesting and I trust that they will be fruitful, to the end that out of the discussions to take place here will develop suggestions and recommendations which will be helpful to those of us charged with the administration of public affairs.

We seek constructive cooperation from all who are in a position to aid us in the culmination of our great program for a reborn Philadelphia.

* * *

WHAT INCODEL'S PROGRAM MEANS TO THE NATION

Hon. Robert C. Hendrickson
New Jersey State Treasurer and Member of Incodel

Delaware River Basin Conservation Conference
Bellevue Stratford Hotel, Philadelphia, Pa.
January 15, 1948.

MR. MAYOR, SECRETARY MATTHEWS, MEMBERS OF INCODEL AND GUESTS:-

It is, I think, especially fitting that this Delaware River Basin Conservation Conference be held in Philadelphia, because, in no other City in our Nation could it be more appropriate to discuss in open forum a subject entitled: "WHAT INCODEL'S PROGRAM MEANS TO THE NATION". It was here that representatives of those states from which nature moulded the Delaware River Basin --- namely, Pennsylvania, New York, Delaware and New Jersey - joined with each other in a mutual pledge to cooperate fully in support of two instruments of government which have no parallel in the history of free peoples - the Declaration of Independence and our Federal Constitution.

It was through these documents that the "City of Brotherly Love" took on the new and enviable title: "The Birthplace of American Liberty". There can be no doubt that the very best in American tradition as exemplified by the men who gave us those charters of liberty here in this great City, served in a large measure to give impetus to the spirit of unselfish and wholesome cooperation which has dominated every act and deed of the Interstate Commission on the Delaware River Basin since its inception eleven years ago.

To deny INCODEL its place in national leadership in the field of government, would be an act of gross ignorance of modern technics in government. It has become a model of the ways and means by which the Federal-State system under which we live, can operate with ever increasing efficiency. Under its philosophies, Local State and Federal programs can be coordinated with a maximum of cooperation,-

Do not be startled when I say: THE FUTURE GENERAL WELFARE OF THE WORLD WILL DEPEND UPON THE SUCCESS WITH WHICH THIS NATION EXECUTES ITS CONSERVATION PROGRAMS. And I have the temerity to add: THIS NATION'S AND THE WORLD'S SUCCESS IN CONSERVATION HINGES UPON THE ACCEPTANCE OF THE PHILOSOPHIES AND PROCEDURES UNDERLYING THE PROGRAMS OF INCODEL.

Some folks may well say that this statement is another one of those "glittering generalities" - that it leaves too much to the imagination - that I have not fully contemplated all the factors involved. While I admit that this might be a debatable question from the point of view of the person who lacks vision and faith - I would remind such people of one of Solomon's most quoted statements "Where there is no vision the people perish" and today, my friends, we need vision above all things.

In relation to the subject which brings us together today, I concede that it would be impossible to analyze the entire problem of Conservation as we know it in as short a time as has been given me today. Accordingly, suffice it to say that as long as the U. S. of A. intends to thwart the destructive forces and ideologies which would destroy our concepts of liberty and freedom through a fair, just and proper distribution of coal, oil, lumber, food and many, many other items of our national resources and heritages, we must make adequate provision here at home, to properly conserve these resources - and develop stockpiles therefrom which will insure our own future well-being as well as the general welfare of our neighbors abroad. To do this, we must be ever mindful of our own concepts of government and its well defined constitutional procedures.

These basic principles even before current World demobilization, were well established as a part of INCODEL'S program for the development of the natural resources within the Delaware River Basin. There never was, in our thinking, any

suggestion of a strictly provincial or territorial point of view. Our aims were always the development of a better way of life for all concerned.

Happily enough, I can view this problem in a dual role and without prejudice. First, as one who has the average interest of an American citizen greatly concerned with my country's ever-growing tendency to waste its natural resources and secondly, as one who has long been acquainted with the objectives of INCODEL and its many and varied activities.

The pattern set by INCODEL is in my judgment so close to the perfect pattern of proper inter-jurisdictional relationship as applied to conservation problems that it has a tremendous appeal - indeed, its appeal from its inception, very quickly enlisted the wholehearted cooperation of all within the scope of its operations who had a fundamental conception of conservation - its purposes and needs.

Today, some seventy Federal, State and Regional agencies are coordinating their efforts under the pattern established by INCODEL - and they are all putting forth their efforts with incredible vigor and accomplishment. All of them have earned commendation. Let us review briefly the program and its results in the eleven years of INCODEL'S existence.

In the field of stream pollution abatement, INCODEL'S program is designed to assist state and municipal government officials in carrying out programs of construction of sorely-needed sewage collection and treatment facilities.

It also encourages and aids industry in the latter's efforts to find practicable methods for the recovery and treatment of industrial wastes.

In the matter of domestic and municipal water supply, INCODEL'S aim has been to provide the guidance necessary for the consummation of a reciprocal agreement among the States, setting forth conditions for the operation of projects involving the diversion of stream flows, which will be mutually beneficial to the individual and collective interests.

As to recreation, INCODEL has given freely of its services for the development of policies and programs for the protection and enhancement of the assets which make the Upper Delaware Valley a natural vacationland, accessible to a greater number of people than any comparable region in America.

Regarding underground water supplies, INCODEL'S main objective is to integrate the surveys conducted cooperatively by the United States Geologic Survey and the water resources agencies of the four States in which the basin is located, into a well-rounded regional plan.

Concerning flood control, INCODEL'S efforts are aimed at securing the development of projects which will not only reduce flood damage, but also serve, where appropriate, other purposes and key into the over-all basin plan of development.

In the matter of navigation, INCODEL'S participation in the successful campaign to have Congress declare that federal projects in this category shall be formulated in cooperation with agencies of affected state governments, is one of the greatest services ever rendered to the nation in the field of water resources development.

As an answer to the problem of soil and forest conservation, INCODEL is providing leadership for the development of policies and programs which is attracting nation-wide attention.

In the development of port and transportation facilities, INCODEL authored the program currently underway for coordinating the activities of all public and private agencies in the region dealing with these problems.

Now, may I say with emphasis, that I have reviewed these achievements with a purpose more important than the achievements themselves - they are accomplishments. What I aim to do here today, is to inspire the way to new and more far reaching accomplishments - even beyond our national jurisdictions,- vaulting ambitions?- Yes! - But hopeless?- No!

Let us take stock for a moment. For some years after the States joined forces "to insure domestic tranquility; provide for the common defense, promote the general welfare and secure the blessings of liberty" State governments functioned reasonably well under the Constitution. Eventually the machine age caught up with us and brought on unforseen economic problems which had to be met sometimes forcefully. We found that our individual states were no longer truly "independent". To prove this nearly cost our present system of government. As our commerce and business expanded, State boundaries lost their original conception and we were more and more dependent upon each other - the North, the South, the East and the West. Again and again State laws were in conflict with each other and over-all policies and regulating programs were as opposite as the two poles.

At any rate, the war between the States proved beyond any question of doubt that a spirit of cooperation among the States of the Union was the only answer. Mr. Lincoln saw this long before his rise to national leadership - Since the war between the States, the conception of well ordered relationship between the States has grown by leaps and bounds - and in 1935 there came into being, a new organization "The Council of State Governments".

This organization dedicated entirely to the coordination of the efforts among the States, and the leveling of petty political and jurisdictional disputes in all matters of interstate conflict has demonstrated its complete effectiveness.

As you all well know, as an outgrowth of the Council of State Governments, every State in the Union has authorized by legislative action, the organization of a Commission on Interstate Cooperation. These Commissions operate in broad fields of Governmental Administration. They deal with such important problems as taxation, criminal prosecutions, social problems, liquor control, trade barriers, planning and of special significance to this conference "the protection and control of our state and national resources".

Stemming from this principle of interstate cooperation, which has proven its worth on so many occasions - was born in 1936, the Interstate Commission on the Delaware River Basin, and may I say here with emphasis, that cooperation has ever been the watchword and cornerstone of INCODEL'S approach to any problem before it,-

But here again it should be said that INCODEL'S functions and concern were in a very definite category looking to the welfare of the future with due regard to all the people - namely, the conservation and wise use of all the natural resources within one of the greatest River Basins in the World.

And, as I mention the World, may I be bold enough to suggest that some of us who have been associated with INCODEL, have always been mindful that INCODEL could well serve as a pattern for the attainment of a World confederation of governments - by whatever name you choose to call it.

As we review Postwar conditions in Western Europe today, we cannot help but be reminded of the problems which confronted us here in the nineteenth century. The parallel will bear close study on the part of anyone who would deny that there can be one day, within our hopes, a United States of Europe. In the 172 years of our national existence, we have demonstrated conclusively our willingness and ability to cooperate for the benefit of all. Even the most adamant of the advocates of "States Rights" will concede today that we must work hand in hand for the benefit of all. But abroad, and unfortunately in the lands from which we gleaned our best citizenry - cooperation is unheard of except among the occupational forces and then only from those countries who would recognize the motives and purposes of INCODEL. No, my friends, cooperation in Europe is merely an expression to be tossed about over conference tables - to be taken advantage of by powers which would for the self-aggrandizement of their leaders, even submerge Christianity.

As we think of interstate cooperation in contrast to some counter-part in Europe - we must concede lingual and customal barriers. But after spending more

than two years there in the important business of restoring all levels of government from the bottom to the top, I am firmly convinced that there is a common language understood by all. It is simple decency and common honesty - and they can only be expressed by unselfish teamwork which gives due recognition to both the team and those who support it.

Teamwork, my dear friends, is only another way of saying cooperation, and whether this great attribute is applied here in America, or in Great Britain, Italy, France, Belgium, Germany, Austria, Russia, China or Japan, it will produce results. It will effect economies, produce comforts, bring happiness, and if carried to its proper extremes, will make for world peace ever lasting.

Believe me when I say, and I say it after close personal association with the best elements of Western Europe, that a Federation of European States is not beyond hope. It is conditioned on two factors - our willingness to furnish a fearless and vigorous leadership such as we did for our own colonies and our abiding faith in what that leadership produced here.

As we set about to solve local, state, regional and national problems here at home, we should ever be mindful that by our example, others will be guided. I rather suspect - in fact I know, that one of Europe's problems today stems from the fact that since the end of the "shooting war" we have not been too good an example of the "cooperation" we preach.

Actually, from my long experience as a public servant at local and State levels, as an Officer of the Army of the United States, as an observer for the Army abroad since the War, I say to you that the pattern for a United Europe, is already cut--putting it together requires nothing more than careful advance planning and the "will to do". Initially, such a council of European Nations

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would thoroughly analyze and appraise the entire European economy, having particular regard to the specific needs in all of the Nations concerned. From these studies and appraisals, a sound over-all plan may be developed for the mutual benefit of all whereunder the obstacles which lead to economic disorders would be reduced to a minimum. Trade barriers are no less destructive in Europe than they were here in the United States. Indeed, they are in some countries abroad, foremost among the hazards which stand in the way of World peace.

Another problem which would necessarily be given high priority on any agenda which a Council of Nations in Europe might promulgate, would be the conservation of Europe's natural resources. Depleted as they are by more than four years of war and the waste which always goes hand in hand with war, it is not difficult to see the need for "all out" cooperation in this field. When they put their minds to it, the Nations of Europe individually are much better at building "stock piles" for future needs, than we are, but they have never yet permitted themselves to partake of the great advantages of unselfish extra-territorial cooperation.

Surveys here in this Country, have proved again and again that our great store of resources is being depleted at an alarmingly rapid rate. What then, of the additional drain necessitated by the need in countries abroad, unable under present conditions to support themselves? Instead of continuing to waste, this very acute emergency should shock us into a full consciousness of the need for immediate action here at home.

Europe, if it is ever to become self-sufficient again, must find her answer largely through sound conservation programs. We must show the way first by our own good example; second, through proper guidance.

Admittedly, the task, both here and abroad, is long and hard, but the lessons we have learned from INCODEL and its rich experience in the principles of cooperation as applied to conservation and related problems, at least make the answers we

are searching for, less difficult to find. The crux of Europe's problem, the factors which make the solution so hard to find, is that the sixteen Western European countries comprise an area considerably less than one-half of the total area of the United States, yet their combined population is twice as large as ours - over 270,000,000 people. Securing a meeting of the minds of so many who have for so long been divided by race, customs and language barriers, is a gigantic task but one day it will be done, if not through peaceful persuasion and under our cooperative leadership, then it will come under a ruthless domination by Russia. In the latter case, there will be unity, but the cooperation involved, will be weird according to the standards which have built the great State and Federal system which we know here in America.

In this war of ideologies, we here in America have a terrific responsibility, both to ourselves and the World at large, and let me remind you that there is no "ducking it!". It is our last great chance - either support the Marshall Plan and all that it implies, or else we must prepare ourselves to compete, in the days to come, with a new European economy - the sort of an economy which will not fit into our way of life - the sort of an economy which will completely disrupt cooperative programs of the character whereunder we may plan soundly for the future conservation of our great national resources.

Our course is clear. Let us not be afraid of "name-calling". If it be imperialistic to lift downtrodden peoples and set them up under well conceived patterns of free governments, then I deem it a great honor to be called "imperialistic". No other governmental agency in the United States representing the organized efforts of a section or area for the advancement of conservation and encouragement of the proper uses of natural resources available to all within the area, can point to such success as that which has been attained through INCODEL or in the broad sense, INTERSTATE COOPERATION.

This does not mean that INCODEL possesses any mysterious powers. It does indicate that we in our earnestness to conserve the resources in the Delaware River Basin, have organized wholeheartedly under a pattern which perfectly meets the need. INCODEL, as I have already indicated, has established a national pattern which can mean the difference between a "conservation conscious America," or a wholly disorganized and confused effort. The one, vital not only to our Country and the World; the other, a friend - and ally to further World disorder! Let us have the first!

* * * * *

DELAWARE RIVER BASIN CONSERVATION CONFERENCE

PROGRESS OF PORT AND TRANSPORTATION SURVEY - LOWER DELAWARE RIVER BASIN

Major General Harry B. Vaughan, Jr.
Port Survey Engineer, Delaware River Joint Commission
January 15, 1948

The Preliminary Report of The Delaware River Joint Commission of Pennsylvania and New Jersey will be completed and available according to schedule by March, 1948. It is regretted that the studies with conclusions which will be contained therein are not here for presentation before this meeting.

The following remarks are made for the purpose of orienting and advising you as to the background which has regulated the steps taken by the Commission:

The Delaware River Joint Commission of Pennsylvania and New Jersey was first established in 1919 by acts of legislature of the two states. The Commission was charged with the erection and operation of the Philadelphia-Camden Bridge.

In June, 1947 by similar acts of legislature of Pennsylvania and New Jersey, the Commission was directed to formulate a specific action program for the promotion of the Delaware River Port and the conduct of an investigation into the need of additional means of communication, bridge or tunnel, between Pennsylvania and New Jersey. The study of these problems was to be in cooperation with the Interstate Commission on the Delaware River Basin.

The Commission found itself with a major problem without any experience in port affairs. Some comfort was derived from the fact that both Governors Duff and Driscoll were earnestly behind the project. Of one fact each member was sure and that was the proper approach was to start at the bottom and find out about the port before spending any money to improve reputedly bad practices and conditions.

The Executive Committee of the Commission came forth with the following report: "The Committee looks upon this as an opportunity to accomplish a public service that will be of great value to all communities along and adjacent to the Delaware River from Trenton, New Jersey and Morrisville, Pennsylvania to the Atlantic Ocean. The importance of increasing commerce in this vicinity is self-evident. In the past, ports have risen to greatness and then decayed, a fate the Delaware River Port must not suffer. The regeneration of the port can not be accomplished in a few weeks or months, nor can it be done without the expenditure of money and effort. Above all, it will require the aggressive, wholehearted help of all who have a stake in this enterprise."

Before taking action, the Commission had the opportunity of reviewing many comments, both favorable and unfavorable, about the port: One said that there had never been a plan for the port's development; that the only business left to the port was what New York and Baltimore did not want; that Philadelphia had become a pick-up station for ships moving from Baltimore to New York and, but for the advantage in distance of the route by way of the C and D Canal, it would not have that business. Freight would not come to the Delaware River Port unless ships were moving in and out more frequently; to accomplish this, the ships must be owned in the port. The manufacturer or forwarder would not ship to the port since, if the freight missed one boat, there was very little chance of another coming along very soon going to the same place. Another comment was that movement of cargo from the Hinterland to Philadelphia and thence abroad could not be financed in Philadelphia whereas, by New York, it could be done most efficiently. To explain - a manufacturer in the middle west could make shipment, take an invoice from the railroad, send it to his bank in New York or to his forwarder from whom he would receive a check either upon delivery of the freight to New York or upon its receipt at its foreign destination. This was all possible

on account of New York banks' having representatives in countries all over the world. The manufacturer's work was finished when he turned over the invoice. Another comment was that all commerce passing through or likely to pass through the port could be financed in the Delaware River Port. It was also said that general cargo ships would not come to Philadelphia because facilities at the waterfront could not give ships a fast turn-around; that there was not enough depth at the piers; that the belt line railroad was inadequate; that roads and parking space for motor trucks were not sufficient; that freight differential was in favor of Baltimore over Philadelphia; that there was not enough information disseminated about the port - New York, New Orleans, Baltimore and Boston have agents in Chicago and some other cities, Philadelphia has none.

On account of all these reasons, manufacturers from the vicinity of the Delaware River shipped by truck and rail to New York for loading for shipment abroad. A shipping line stated that never again would they send their ships into the port on account of the pollution of the water in the Delaware River. To obtain ships, better turn-around time must be provided, three days should attract the fast ships for general cargo knocking at the door of Philadelphia which should acquire the best loading facilities available backed up by storage warehouses and adequate rail nets to the Hinterland. With these factors present, commerce would ROLL into Philadelphia! A large Union Station and Terminal is needed for truck traffic.

It was most refreshing to have comments about the advantages such as - no lighterage is required in the port whereas lighterage is the rule in the Port of New York. It is well known that Philadelphia is a fresh-water port and would have a great advantage over New York on that account if it were not for the tremendous pollution to be found at all berths. Another comment heard from many sources was that facilities for handling cargo, both bulk and general, were the best in the United States, that there was a sufficient number of berths and

the rail net more than sufficient to move commerce from the Hinterland. Also, that Philadelphia did not need anything but a strong promotion program. A statement most heard was: "What's the use of talking about it? Nothing will ever be done to help the port; it's too far from the Atlantic Ocean anyway."

The Commission members were determined to have explanations and answers to all these comments. It was vital that the potential and condition of the port be known before any plan could be made. The Commission, therefore, decided to make a report in two phases, the first to contain an economic study to determine the potential of the port and a survey of the port facilities. To do this, on October 22, 1947, the Knappen Engineering Company of New York was retained to submit a report by March, 1948 to include therein a complete study of the economics involved, the potential commerce of the port and a survey of its facilities as well as to report on all other matters of interest to the Commission in formulating the program. The Engineers have been collecting information and making surveys. They have talked to over one hundred interested organizations and individuals. The deepest interest has been shown in the problem and the cooperation has left nothing to be desired.

The second phase of the report will contain recommendations for the specific action program for promotion of the Delaware River Port. These recommendations will be based on the findings in the first-phase report and subsequent studies and surveys - all to be completed and a final report submitted to the Governors of the States of Pennsylvania and New Jersey at the earliest practicable date; in no case, later than the first day of February, 1949.

The Commission knows that it does not have to ask for the continued interest and cooperation of the community. Federal, State, all organizations as well as individuals have been most helpful.

It wishes to take this opportunity to express its appreciation to the Interstate Commission on the Delaware River Basin and other organizations and individuals for their very fine interest and aid.

* * *

WHERE ARE OUR GROUND WATERS GOING?

By
Jack B. Graham, Geologist in Charge
Pennsylvania Ground Waters

U. S. Geological Survey, in cooperation with
the Pennsylvania Topographic and Geologic Survey

January 15, 1948

Beneath our cities, our farms, and our forests lie tremendous reservoirs of ground water, of great value to our present-day economy, and of even greater importance to our future growth and welfare. Important as this basic commodity is, being out of sight it is out of mind to most people. But these are times when the demands of our highly industrialized economy and our densely populated areas force us to take stock of our resources, to plan carefully for the future, and to protect ourselves and our natural resources from unwise practices.

The fact that valuable water supplies do exist beneath the land surface of the earth has been known for a very long time. As long ago as 800 B. C., tunnels called "kanats" were constructed by the ancient Persians to provide municipal water supply and to irrigate extensive farm areas. Such tunnels were designed to tap underground water in foothill areas where rainfall is relatively plentiful and transport it long distances to dry lowland areas for municipal and agricultural purposes. Some of these tunnel systems were remarkable engineering accomplishments, reaching a maximum depth below the surface of 500 feet.

But even with this auspicious start, and our present-day large-scale use of underground water, information concerning this vital natural resource has lagged far behind our technology in other fields. The belief still exists among many that such resources can be located by witchcraft methods. Within the past month, one of the Boston newspapers carried articles implying that some people had the ability not only to determine the location, but the depth

and direction of motion of veins of ground water, by the use of a forked stick or twig. There are many variations of this "water witching". Some "doodle-buggers" depend on the simple peach or willow twig. Others have devised "mysterious" gadgets, including sealed metal boxes and similar apparatus. Claims of the operators cover the whole range of absurdity. A few do not go farther than promising to locate an underground stream; others would have you believe that they can tell you the depth, within a foot, and the quantity available, within a few gallons. Surprisingly, many people and concerns, who in all other activities demand service based on sound scientific fact and experience, will accept the theory of water witching as truth and pay handsome fees for its application.

In the days of our grandfathers, water was water. Little thought was given to subtle differences with respect to its dissolved solids, temperature, and constancy of its properties. But, today, we demand refinements in our entire scale of living. We want better-grade products, more highly processed food, cleaner and more palatable drinking water, and the manufacturers and processers of these commodities are untiring in developing better products with greater efficiency and lower cost.

And so, we are gradually learning that waters differ in their suitability for various needs. Manufacturers of high-grade paper and textiles require water free from color, and with a minimum of iron and manganese. Laundries must have soft water to avoid excessive soap consumption. Industries desire water which will not form scale in boilers. Water for cooling purposes is best when the temperature does not exceed about 60°F. and which remains fairly constant in temperature throughout the year. The rapidly expanding food-processing industry needs water free from all tastes and odors.

Waters from our two chief sources of supply, surface water and ground water, may vary considerably in their year-round characteristics. Surface water,

much more than ground water, contains varying amounts of suspended matter, requiring filtration before being suitable for most purposes. The temperature of water in our streams and lakes may vary from 32° F. in the winter to 80° or 90° in the summer. The amount of dissolved matter may change greatly, depending upon the volume of flow and other factors. Because surface water provides an easy medium for waste disposal, this source is subject to contamination and some form of purification is usually necessary.

Ground water comes from springs and wells, and is normally clear and bacterially pure. Over the country as a whole, water from the ground contains more dissolved minerals than surface water, but its chemical character remains relatively constant the year round, as does its temperature. Where ground water is available in sufficient quantity, it is often preferred to surface water because of its relatively constant chemical nature and year-round cool temperature, which is especially attractive for air conditioning use. The generally low cost of development of small and moderate supplies is another point in its favor. Consequently, most small municipalities in the United States, many industries, and nearly all farms and rural residences utilize ground water. Most large cities in the country use surface water because the quantity required is greater than the local ground-water supply, and the cost per gallon is often less when the larger supplies are developed.

In 1945, an average of about 20 billion gallons of ground water was used for municipal, industrial, irrigation, and domestic purposes in the United States each day. In the Philadelphia-Camden area, such use amounts to about 150 million gallons daily. Approximately one-half million people in the area use ground water for domestic requirements. Of the total, by far the larger part is used in the portion of New Jersey adjacent to Philadelphia, owing primarily to the more favorable geologic conditions in that area.

Most of the water supply for central and southern New Jersey is derived from wells drilled into water-bearing beds which are a part of the

sediments of the Atlantic Coastal Plain. These water-bearing formations are layers of loosely packed sand and gravel. The water-containing layers are generally underlain and overlain by beds of clay or other non-porous materials, and they constitute, in effect, tremendously large, flat conduits or pipe lines, raised at one end. The Coastal Plain region to the south and east of us is underlain by a series of such water-bearing formations, one above the other, all dipping to the southeast at rates of from 40 to 60 feet to the mile. The lowest and oldest underground conduit is also the most extensive of the series. It underlies South Philadelphia and supplies about 30 million gallons of water daily to industries and the Philadelphia Naval Base. The City of Camden and a few industries in New Jersey opposite South Philadelphia secure their water from this same underground reservoir.

The water-bearing beds I am describing have wide distribution. They underlie the Coastal Plain from Long Island on the north to Texas and Mexico on the southwest. They cross parts of New Jersey and include South Philadelphia in Pennsylvania. The water contained in these sand and gravel layers is interstate in character. It is vitally important that we learn as much about it as possible, in order that its use may be equitably enjoyed by those who have control over it. It will be helpful to refer again to the analogy of the pipe line. Two factors control the amount of water that can be withdrawn from any pipe. One is the dimension of the pipe, and the other, the amount of water available at the intake. If the amount being taken out of the reservoir is greater than that fed into it, water must come from storage, and this storage, if too heavily drawn upon, may eventually be exhausted, leaving the wells dry.

It is obvious, then that in order to utilize with safety the optimum amount of water from these Coastal Plain sands and gravels, it will be necessary to determine what amount is now entering these natural underground pipes or may be induced to enter them.

The basal sand and gravel formation in the Philadelphia-Camden area comes to or near the surface in a long, narrow zone extending from Bordentown, New Jersey to New Castle, Delaware. This is the open-end or recharge area, and it is the ability of the formation along this narrow zone of outcrop to accept water which will determine the maximum ground-water supply in the formation. Fortunately, recharge conditions for this particular underground water system are enhanced by reason of the fact that both the Delaware and Schuylkill Rivers cross over the sand and gravel outcrop zone. These rivers undoubtedly feed water to the formation wherever the water level in the adjacent gravel has been drawn below river level and the river bed is not sealed by fine-grained sediments.

In this regard, it is believed that a substantial part of the water derived from the formation underlying the City of Camden is supplied by Delaware River water, which in its slow movement toward the wells undergoes natural filtration. Such attempts by nature to make up the quantity of water which is taken from formations by pumping is, in many cases, a slow process, and water levels in an area may be lowered many feet before natural replenishment from adjacent river systems becomes significant.

In South Philadelphia and in nearby areas in New Jersey, ground-water levels which were formerly a few feet above sea level are now several feet below sea level as a result of many years of pumping. Declines in water level are to be expected in any area when the withdrawal of ground water begins, but comprehensive studies of the geologic and hydrologic conditions are necessary to determine the maximum amount of water which can be developed without a continuing decline in ground-water level.

How far can we safely go in our continued exploitation of ground water in this area? At present, we do not know. In some localities, current withdrawals are being maintained without significant lowering of ground-water

levels and it is reasonable to assume that, in such cases, infiltration is sufficient to balance the present demands, and perhaps exceed them. In other places, where ground-water levels are currently declining, it is only good business to determine whether we are operating at a pace which will eventually lead to the depletion of this valuable resource.

Although the problem is difficult and it requires time and money to solve, it cannot be treated in a "do nothing" manner. It was forcefully brought out in many places during the war that our underground water supply is not inexhaustible. A comprehensive basin-wide study of ground water, which might cost $100,000 over a 5 to 10 year period, becomes not only a sound investment, but an economic necessity when the very existence of industry, valued in the millions of dollars, is at stake. Our approach must be the full utilization of our water resources, and studies of our surface and ground-water supplies must be undertaken together.

The cost of determining whether a potential water-supply failure in the offing is far less than that of the disruption of economy which occurs when the well runs dry. In Louisville, Kentucky, wartime industries engaged in the production of alcohol, synthetic rubber, and other essential commodities were faced with a curtailment of production due to lack of cooling water. Production was maintained only by means of expensive artificial recharge of certain wells. Similar cases in Ohio, western Long Island, and many other places in the country could be cited at length.

We do not have to look beyond South Philadelphia to find an example of the pressing need for ground-water data. One such case is the concern of the Navy Department over the possible effect on Navy wells of a new ground-water diversion planned for a huge new oil refinery in New Jersey, opposite the Philadelphia Naval Base. Such problems should be anticipated and information should be gathered in advance so that maximum use of the ground water may be

encouraged, contingent upon the security of the rights of others.

It is our responsibility to find out where our ground waters are going, and to devise sensible, equitable, and economical procedures for meeting problems before they arise.

Information about our ground-water resources is sorely needed, and needed now. With this knowledge must come effective legal control in every State. The Delaware River Valley will increase in importance in the future. Its inhabitants must be prepared to utilize and protect its resources of ground water to the fullest. This can be done only by finding the answer to the question, "Where are our ground waters going?".

* * *

CONSERVATION - AMERICA'S MOST BASIC PROBLEM

Hon. Franklin H. Lichtenwalter

U. S. Congressman, Lehigh and Bucks Counties, Pennsylvania

Delaware River Basin Conservation Conference
Bellevue Stratford Hotel, Philadelphia
January 15, 1948

It is an honor to have this opportunity to speak with you about a subject so profound and fundamental as Conservation. I am happy indeed to accept a part in your program, for I sincerely believe that Conservation IS America's Most Basic Problem. In fact, I am willing to reach out farther. In my judgement, the salvation of the world depends upon the success in which we handle the job of Conservation in this country. Conservation is not only an all-important domestic consideration; it is also a matter of vital international significance. General Marshall put the finger on that fact when, a short time ago, he stated: "....our foreign policy has entered the American home and taken a seat at the family table."

The world is sick today - very sick. It has reached the most critical point in all history. One only needs to read the headlines in any newspaper or listen to the radio to come to that conclusion. Hunger, poverty, strife, despair, human misery and death are rampant. Although no longer at war, there certainly is no peace in the world.

Most of the globe's ills can be traced to one major cause - man's inhumanity to man and his arrogant disrespect of the simplest of the laws of nature. From time immeasurable, regardless of racial background or religious doctrine, humans have known that their existence and welfare are derived from the natural resources

with which they have been surrounded. And yet, until most recently, nations have never seen fit to use the treasures of life which nature bestowed upon them in a prudent manner. At the peak of power and prime of life they always seem to change from plodding good samaritans to gluttonous, irresponsible monsters.

Only a brief consideration of history is required to confirm that assertion.

Consider first the plight of Greece, where an American Mission of Aid at present is striving valiantly to save that country from oblivion. At one time, Greece was a world power with an extensive domain. But, it squandered its resources, entered upon an era of intemperate living and now lies weak and exhausted, a prey to the vultures who would devour it.

I need not refer to other examples of cultures which have recklessly wasted their resources and now lie dead and buried under their own debris. Suffice it to say that man has left a terrible path of ruin across the pages of history, in Europe, Asia Minor, North Africa and China.

Now, let us take a look at the United States.

Today, it is the youngest major nation in the world. In its 172 years of existence - which, in terms of the span of life of man, is but seven generations and, when measured by the age of the world, only a fleeting moment - America has become the most progressive, prosperous and powerful country on the globe. Its rise to this pinnacle of supremacy can be attributed to two major factors: First, the abundance and diversification of its natural resources; and second, the excellence of its system of Constitutional government. This combination of God-given assets and a government designed to afford a free and full opportunity to its people for self-improvement has made it possible for the United States to become the beacon for all humanity.

The dominant question that confronts us now is: How long can American continue to maintain its enviable position of superiority. The answer hinges, more than anything else, upon how effectively the United States utilizes its natural resources from this point on, and upon how tenaciously it clings to the principles of government which has served it so well through the years.

Having stated this hypothesis, it is up to me to analyze and prove it.

As to our natural resources, aside from the air we breathe, the most important are soil, water and minerals. Upon these three essentials hang the lives and livelihood of all human beings. It makes no difference where you live, what your occupation is, who your forefathers were, or who your children's children will be, you cannot sustain life and attain physical growth without the products of these three resources. Make no mistake about that!

At the beginning of our national history we were a republic of approximately four million people. At that time we were in possession, in what is now continental United States, of 822 million acres of virgin forests and approximately 460 million acres of potential arable land with a cover averaging nine inches of rich, fertile soil. Our streams sparkled with pristine purity and were alive with fish. Our tremendous store of mineral resources - coal, oil, iron ore and uranium - had not yet been unearthed.

The passage of time has altered this picture materially. The amazing progress of this country, to which I have alluded, was only made at terrific cost. The price paid for industrial supremacy, for winning of wars, for our efforts to establish a lasting peace, has been stupendous. Over the years sight was virtually lost of the importance of our resources. So abundant were they that they were looked upon as being inexhaustible or forever permanent. As a result - a

few times by necessity, more often through sheer indifference and thoughtlessness- we have permitted vast forests, fertile soils, clean waters, and valuable minerals to be wantonly wasted, ruthlessly ruined and selfishly exploited.

Today, in contrast to the four million of yesteryear, we have 145 million people in our own country to feed and sustain, and for whom to provide a livelihood. More than 35 times as many mouths to feed and much less to do it with! And, in addition, we are being asked through the Marshall Plan to help feed, clothe, keep alive and rehabilitate 270 million additional people in sixteen nations in Western Europe during the next four years! And that is not the end to the prayers for succor from this country!

Can we carry this present load and shoulder our responsibility to future generations? The answer is an emphatic "NO", if we continue our riotous extravagance and utter neglect of plain duty. Now, instead of 822 million acres of productive forests we have less than 100 million acres. While the area of our arable land has not shrunken, it has lost much of its richness. At least one-third of its top-soil has gone forever because of our failure to protect it properly from the ravages of wind, and rain, and the greed of man. Our streams not only have become open sewers and cess pools, but have been exposed to violent fluctuations of flow ranging from destructive floods to breathless dryness because of man's laceration of the forests and the lands from which they are fed.

Most of our mineral resources have been dangerously depleted.

In less than 200 years we have undone what it took nature thousands and thousands of years to accomplish.

On the basis of this record of denuded forests, scarred and eroded soils, polluted and desilted streams, reckless mining of minerals and exploitation of gas and oil fields, destiny has written the condemnation: "Thou has been weighed in the balances and found wanting."

What shall we do in the face of this condemnation? Shall we maintain fierce and stubborn pride and deny the allegation? Or shall we acknowledge the fault and find a remedy?

Shall we, in ignorance and selfishness, continue to permit unnecessary waste and destruction of our natural resources? Or shall we admit our obligations and honor them?

Fate has flung the mantle of world leadership upon our shoulders. How shall we wear it?

We will only be able to fulfill our responsibilities to ourselves and posterity by making adequate provision now to embark upon an immediate and aggressive program of conservation. In no other way can this nation continue to grow and prosper and, in the meantime, help tide over the destinies of others.

We are now living upon the products grown on about 390 of the total 460 million acres of arable land which can be developed in this country. This production is only sufficient to provide the necessities of life in the form of food, fibre, clothing, shelter and basic requirements of industry for a very little more than our present population.

Similarly, we are scraping the bottom of the barrel in respect to most of our irreplaceable mineral resources which, today, are the source of a substantial portion of all things that man uses. Curiously, however, we are witnessing the beginnings of a new era in the development of substitutes for many critical minerals and metals. Innumerable chemists in many laboratories are engaged in the synthesis of plastics and the adaptation of artificial resins for manufactured devices of all kinds. Spurred by the rapid depletion of non-replaceable metals, science is developing useable substitutes from forests, plant life and physical resources which can be reproduced, provided that we have the good sense to

husband them properly.

Our population is increasing at the rate of one to two million persons a year. Western Europe is expecting us to supply her with twenty billion dollars for the purchase of tremendous quantities of critical materials. Included in the list to be obtained from the United States in the first fifteen months of the four year plan are 9,000,000 tons of grain, one million tons of cotton, 43 million tons of coal, four million tons of steel and 500 million dollars worth of manufactured machinery and equipment. The plastic age soon will place tremendous additional demands upon the products of our soil, forests and waters.

If we are to meet these requirements we must make the most of our natural resources. It is imperative that we immediately adopt a program of action. Such a program, among other possible items, must include the following steps:

1. We must put our total area of 460 million acres of arable land in first-class shape as speedily as possible.
2. We must stop soil erosion in the shortest feasible time. At our present rate of correction, putting an end to such waste will consume another 100 years. That is not fast enough. If we don't at least double the tempo we will soon experience the tragic results of another "too-little, too-late" proposition.
3. We must stop the needless slashing of our forests. Right now we are cutting annually 17 billion board feet more than nature produces. It will take us 600 years to replenish the 75,000,000 acres which we have irresponsibly laid waste. In the last ten years we have lost by fire, disease and waste enough lumber to build homes for 10,000,000 G.I.'s.

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4. We must redeem our streams and navigable waters.
5. We must conserve and replenish our underground water supplies.
6. We must mine our coal and mineral resources more judiciously and use them more wisely.
7. We must find further productive uses for oat hulls, sugar cane fibres, corn stalks and cobs, wheat straw, sawdust and other lumber wastes, peanut shells, pulp and peel of citrus fruits, and all other materials which find their way into rubbish dumps and incinerators.
8. WE MUST STOP WASTE OF ALL TYPES.

If we do not do these things and do them quickly, the United States will go into a decline when its population reaches about 180 million. At the present rate of growth that is not more than two generations in the future.

CONSERVATION IS INDEED AMERICA'S MOST BASIC PROBLEM.

Russia is the only other self-contained nation on earth which has a quantity and quality of natural resources and a number of people comparable to the United States. We cannot shut our eyes to the fact that the two countries are competing frantically to curry world favor.

America must win that race! Otherwise, freedom may vanish from the face of the earth. And America will win! Not because of superiority of its resources, nor because of any advantage in population numbers. The United States will stay on top solely and simply because, under its system of free government, it offers its citizens a positive, spurring inducement to develop ways and means to make the most of themselves and of the resources which nature has placed in their hands.

America's future, the World's future, depends upon us here in this country today and upon the way we view and treat the problem of conservation.

Incodel is to be highly complimented for the example which it has set in advocating that the problem shall be solved by continuing the application of the long established and well-proved American principle of government of the people, for the people, and by the people; and for demonstrating that this procedure still works successfully.

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REPORT ON SCHUYLKILL RIVER PROJECT MADE TO THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN JANUARY 15, 1948 AT THE BELLEVUE STRATFORD HOTEL, PHILADELPHIA

Commander E. S. McCawley, U. S. N. (retired)
Deputy for Hon. Milo F. Draemel, Secretary
Pennsylvania Department of Forests and Waters

Mr. Chairman, Members of the Interstate Commission, Ladies and Gentlemen.

Admiral Draemel, Secretary of the Department of Forests and Waters, has asked me to express his sincere regrets that other duties prevented his presence here with you today. He trusts that I, as his Deputy, may be an acceptable substitute to report to you on the progress of the Schuylkill River Desilting Project.

The Schuylkill, the largest tributary to the Delaware, drains a long narrow strip: Zone III according to Incodel's designation, a strip heavily populated and heavily industrialized. The River was an original source of water supply for Philadelphia and, alas, an original sewer for William Penn's "Greene Countrie Towne". The Schuylkill Valley was also the cradle of Pennsylvania's Iron Industry and locked in the mountains of its headwaters lay a vast treasure of anthracite, the "stone coal of the early legends".

A River of great beauty and charm along some of its rural reaches and one of appalling desolation and desecration in many others. The Schuylkill can qualify for still another first, it is the number one problem child of the Delaware River watershed.

The beginning of the Schuylkill's downfall dates from a night in the year 1790 when, after a day's hunting, a roaming New England lumberjack named Nicho Allen built his campfire among some rocks on Broad Mountain. No doubt he cooked a simple supper in the shelter of some overhanging evergreens and as

darkness fell, threw some extra wood on his fire. Then, like all good woodsmen, he fell asleep with his feet close to the comforting blaze.

In the middle of the night, Nicho awoke with what was probably Pennsylvania's first recorded "Hot Foot". He had built his campfire on a fine outcrop of anthracite and the "stones" of his fireplace were on fire!

This is Schuylkill County's own story and though Carbon County has its Philip Ginter, I rather like Nicho and his "hot foot". Incidentally, that's all he ever got out of his discovery - - that and the posthumous honor of having Pottsville's principal hotel named for him.

You may choose your own story of the genesis of anthracite in Pennsylvania but its discovery started a vast chain reaction as far as the lovely Schuylkill was concerned. Slowly at first, then with a rapid acceleration, the black tide of culm has been washed into the once clear mountain brooks. Thence to the larger streams and at length to the River itself. There in drifts and shoals, backed up behind the old navigation dams, the culm clogs and chokes the channel, raises the flood plane and spreads out in a grim black blanket over new stretches of low land with every spring freshet.

Anthracite has brought riches and prosperity to many. It has brought prestige and wealth to the Commonwealth, but in its end results, the mining of hard coal does not leave a pretty picture. Blighted hillsides, riven by strip mining, vast piles of mine wastes changing the topography of entire regions and lastly, lacing through the mountain valleys flow the inky black streams to carry their burden of anthracite silt and acid mine water through the river valley to tide water. And this went on year after year!

The surveys made by the Army Engineers and the legislative background of the present Schuylkill Desilting Project are matters well known to the members of the Interstate Commission. With the final passage in June 1945 of Act 441 by the legislature of the Commonwealth and the actual appropriation of funds, the

way was cleared for the long projected clean-up program.

Governor Duff has given his enthusiastic support to every phase of the plans to give to the citizens of the Commonwealth clean potable water and to the permanent abatement of the pollution of the River by mine, industrial and other wastes. Incodel has set a standard for the Schuylkill at its confluence with the Delaware. One objective is to meet that standard or even better it.

Shortly after taking office last January, our Governor appointed as his Secretary of Forests and Waters, Rear Admiral Milo F. Draemel, U. S. Navy (Retired), war-time Commandant of our own 4th Naval District, whose unflagging interest in the pollution problem of the Delaware Basin is well known to all of you. Having served myself just as his Operations Coordinator and later as his Planning Officer, I can testify first-hand as to how great that interest was.

The newly appointed Secretary wasted no time in preliminary skirmishing. The Navy did not award him the Distinguished Service Medal and the Legion of Merit for sitting on his hands. With a scant six months for planning and organization, an enterprise of major stature was created to deal with the vast undertaking of restoring the Schuylkill to a state of well being.

On June 25, 1947, following an inspection trip of the entire river by the Secretary and his Consultants, the Schuylkill River Project Engineers was formally organized with offices at 20 South 15th Street, Philadelphia.

This Title is one of convenience for the association of four top-flight consultant engineering firms under Joint-Venture contract to the Commonwealth. This type of contract is new in the annals of Pennsylvania but was used by the Federal Government with great success in handling large enterprises. The four firms with their functions are as follows: Harris & Dechant, river dredging - dredge design - disposal works and river training; Day & Zimmermann, Inc., general engineering management and construction supervision; and Albright & Friel

with Justin & Courtney, river dams and desilting works. The effort of the Project Engineers comprising almost 100 employees is coordinated by an executive committee headed by Mr. Frederick H. Dechant, whose qualifications for this important post are well known to the members of Incodel.

Complete liaison with Harrisburg is effected through a Deputy Secretary of Forests and Waters located at the central office of the Project in Philadelphia.

Under the law, the Water and Power Resources Board of Forests and Waters, under the Chairmanship of Secretary Draemel, is the agency of the Commonwealth designated to perform the task.

It should be pointed out that the Joint Venturers do no construction work. Their function is to prepare plans and specifications, to consult, supervise and advise - - in short, to provide the essential "know how" to push the tremendous task to completion on a carefully integrated time schedule. For convenience, the work on the river is broken down into a number of different contracts, each let by competitive bidding to the lowest responsible bidder in strict accordance with the provisions of the Commonwealth's administrative code.

A vast amount of organization work, the assembly of equipment and personnel, various preliminary engineering studies and the overall preparation of the plan of attack for "Operation Clean-up" was crowded into the month of July and on August 5th, the first survey crew started upriver from Norristown to determine the exact amount of culm in the river. The 1944 survey of the U. S. Army Engineers disclosed the presence of 30,000,000 cubic yards in the river, 20,166,000 of it between Auburn and Norristown, and estimated that 3,000,000 cubic yards of additional silt entered the headwaters annually. Sound engineering practice dictated that the first problem was to relocate this culm, find its distribution along the river so that plans could be

completed for its dredging and disposal in conveniently located impounding areas.

Incidentally, this culm averages 50% combustible. The recovery, processing and ultimate sale of about 15,000,000 tons of fine coal, which belongs to the Commonwealth, will help to pay some of the cost of this project. Current shortages of some types of fuel make this big stockpile sound most attractive.

The final determination of the location of the culm in the river was completed in December and as might be expected shows a considerable redistribution in the last two years. There is now 24,300,000 cubic yards above Norristown. The rest has moved downstream.. Today's total is probably nearer 40,000,000 cubic yards. Now is the time for action. We are commited to a program from which there can be no turning back.

On August 30, 1947, the first contract for work in the river was signed. This was for exploratory core borings to determine the sub-surface structure at the proposed locations for permanent desilting basins and dams.

Contract number two followed before the first frost. Here was actual "dirt flying", for this called for the demolition of five of the old navigation dams in the upper river. Breached by floods, their removal clears the way for future sluicing and dredging. This job is now underway and is scheduled for completion early in 1948.

Contract number 3 is now out for bids which will be opened on January 30th. This contract, the most important so far, is for four special type, shallow draft, high capacity, electric hydraulic dredges. Sectional in design, these units will be erected on the river and placed in operation in the lower pools above Norristown as rapidly as delivered, which it is hoped will be early in 1949. While waiting for these dredges, in August of this year, Contractor-owned dredges will begin operations in the upper river and by

September 1948, four dredges will be operating. By midsummer of 1949, 12 will be in operation.

When ready, the Commonwealth-owned dredges will be leased to contractors and after the dredging program has been completed, will be used for permanent maintenance work where required.

Contract No. 4 is practically ready to release for bids now. It calls for electrical substations and power connections for all of the dredges.

Other contracts will follow at approximately monthly intervals for various phases of the work.

Preparatory to next summer's dredging, Contracts 5 and 6 call for the construction of the necessary impounding basins to receive the material dredged from the upper river.

The plan of attack follows the general outline prepared by the U. S. Army Engineers in their 1945 survey since Federal participation, authorized by the report, from Norristown to Philadelphia is contingent on the performance by the Commonwealth of certain appointed tasks.

First, to end the pollution of the headwaters by mine wastes; second, to construct suitable desilting basins in the headwaters, Auburn and Kernsville having been selected as the most desirable sites; third, to complete 50% of the dredging above Norristown and lastly, to give assurance to the Federal Government that the task will be completed. The Commonwealth is also obligated to provide for the Federal Government all lands, rights-of-way and easements necessary for the Federal dredging program.

Obviously, the Commonwealth program entails close liaison with the Army Engineers. This was early established as a standard policy.

Concurrently with the engineering study and planning, a tremendous amount of legal detail has been involved. Land acquisition for spoil area and desilting works, rights-of-way, easements, property inspections and property surveys, title searches, deed descriptions and all the attendant negotiations

leading to final purchase. We have been concerned with "A" for "apple orchards" to "W" for "water rights", not quite A to Z but almost. If we put in Incodel's "Zone III, Standards for" - - there is our alphabet complete.

At present, we are engaged in negotiating for land for 24 spoil areas; for rights-of-way for electric connections, for easements along a forty foot strip the entire length of the river in connection with the dredging operations; and for a seven mile right-of-way for the Army Engineers from Fairmount Dam to the confluence of Darby Creek and the Delaware. This last little item involves the Park Commission, the City, three railroads and assorted industrial plants, a tall order for any Real Estate Department!

The police power to abate the pollution of the river from all sources is vested in the Sanitary Water Board of the Department of Health. The legislation, which gave them their authority antedated Act 441, so that their engineers have been busy for some time in the enforcement of the provisions of the clean stream bill. Close liaison with the Sanitary Water Board has been necessary since they were the agency empowered to stop the Anthracite operators from dumping their wastes into the streams. Until this has been accomplished, our effort would be of little value.

Armed with lists of mine operations that have been told to complete approved desilting works by a certain deadline, our inspectors have checked to determine how effective these measures have been and how adequate has been the compliance. Material shortages have held up some operations and there have been other delays in compliance. In order that the Commonwealth may meet its obligations, it may be necessary, in some cases, to invoke the full provisions of the law to insure the abatement of mine waste pollution.

This January, with less than a full year of operation behind us, the progress has been encouraging. It was in 1806 that William Turnbull loaded his Ark with a few hundred bushels of coal to ride the high water to Philadelphia. By 1847, 3,000,000 tons a year were being mined - fifty years more and the total

swells to 100,000,000, an all time high. We are attempting in a few short years to correct the abuses of over a century, because for every ton produced an increment has been added to the culm deposits in the river.

Here in Philadelphia before the Army dredges start, we may see still greater islands of culm in the Fairmount pool as some of the upriver deposits stirred up by dredging are washed downstream. This will be a temporary condition soon to be corrected. Not long ago in speaking of the Schuylkill skeptical Philadelphians shook their heads when clean-up was mentioned. "I'll never live to see it" was their comment. Today there is a bright promise that within a short span of years, the historic river will be restored to an approximation of its one-time purity. If the project proceeds as planned - - certainly most of us here today will live to see it.

* * *

THE LOW DOWN ON THE SLOW DOWN IN SOIL CONSERVATION

Robert A. Harrier
Managing Director, Lehigh Valley
Flood Control Council, Inc.

Delaware River Basin Conservation Conference
Bellevue Stratford Hotel, Philadelphia
January 15, 1948

When, two years ago the Interstate Commission on the Delaware River Basin embarked upon a full-dress program to accelerate and coordinate soil and forest conservation throughout the entire Basin area, we were delighted to join in furthering the program in the Lehigh River watershed -- the second largest tributary drainage area in the Delaware Basin. The INCODEL program was identical in purpose with that proposed early in 1945 by our own Conservation Committee within the Lehigh Valley Flood Control Council, composed of well qualified men local to the area.

The Lehigh Valley is confronted with a serious flood problem. In addition to the construction of economically justified engineering works on the main stem of the river, we are looking toward the basin-wide institution of the best forest and soil conservation practices in the upstream areas of the many small tributary streams that feed the fast-rising Lehigh River.

There is ample proof to show that good land use management makes a definite contribution to flood control. Our investigations have shown that it also pays cash dividends to the farmer in better crops and pastures, and maintains the fertility of the soil for the general welfare of the watershed and the economy of community, state and nation.

I could discuss this subject at length as it relates to our problems in the Lehigh Valley, but this is an INCODEL meeting and because we are an integral part of the Delaware region, and are in complete accord with

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INCODEL thinking on this subject, I will approach it from the INCODEL point of view.

After a very thorough investigation of the whole basin area and the various problems relevant to its agricultural regions, INCODEL came to a timely decision.

It was found that due to indifference, carelessness and a general reluctance to institute an aggressive action program, the Delaware River was rapidly losing its precious top soil. In a little over 150 years, more than one-half of this irreplaceable cover had been washed from the rich farm lands, into streams and on to the sea.

Conclusions were easily reached. If these conditions were permitted to go unattended, it would require only another century to denude the land completely of its precious blanket of rich earth. Fortunately, INCODEL takes a long range view of this problem and is not content to sacrifice the future to the present.

Another fact was also revealed which was of paramount concern to INCODEL. During drought periods, the entire Delaware River System is dependent upon ground water for maintenance of an adequate rate of flow. By controlling the water which washes over the surface of the land, erosion is not only arrested, but by increasing the absorption of surface waters, reserves of essential ground water are replenished as well.

Since the Delaware River supplies life-giving water to municipalities and industries directly affecting the lives and welfare of more than ten million persons, INCODEL logically reasoned that little time should be lost in making the people of the Basin soil conservation conscious and in activating long range soil conservation programs.

I know that it was only after extensive observation and careful study that INCODEL concluded that district soil conservation programs, administered

cooperatively by local farmers assisted by local, state and federal agencies, was most practical.

Through the establishment of a soil conservation district which is provided with effective legal machinery to undertake such a program, coordination of local, state and federal agencies acting in the field of conservation is made possible. This cooperative effort prevents costly overlapping and duplication of responsibility and effort. In addition, districts provide farmers with supervision and use of heavy equipment at nominal cost for construction of soil and water-conserving structures.

Conservation is greatly accelerated through district programs. Increased community interest and cooperation are engendered by the districts because an increasing number of farmers shoulder responsibility for the success of the district program. For example, INCODEL found that the application of practical soil conservation measures proceeded six and one-half times as fast in Pennsylvania Soil Conservation Districts on the average, as in the most active county not in a district.

No wonder then that INCODEL undertook to discharge its responsibility to its four member states by developing soil conservation programs in the Basin through coordination of existing districts, and by helping to stimulate the interest of unorganized farmers in forming new districts where needed.

The task should not have been a difficult one. Each of the four states comprising the Delaware Basin already had the necessary machinery to put soil conservation programs in action. The underlying policies were identical. Each provided for the formation of locally-controlled soil conservation districts at the county level, designed to function with the aid of established local, state and federal agencies.

In each state the prinicpal assisting agencies were the State Extension

Service and the United States Soil Conservation Service. Their services are those which the local district directors need most. The Extension Service helps by teaching farmers to understand and appreciate the urgent need and benefits of soil and forest conservation on their farms, principally by means of meetings, lectures and demonstrations. The Soil Conservation Service assigns a soil technician to the district to make a soil survey of each participating farmer's land, but only with his consent. This is followed by a complete soil conservation plan for the farm. And, of course, supervision is provided for placing the technical phases of the plan into operation.

I have talked to many farmers about conservation farming and have come to the conclusion that most farmers are unprepared, by training and experience, to analyze their often complex land and water problems without specialized assistance. This statement is no reflection on any farmer's intelligence, any more than to recognize the fact that most people need specialized assistance in dealing with their medical and legal problems. The fact remains that the on-the-ground, field-by-field technical advice and supervision of an experienced soil conservation technician is extremely valuable and essential if the farmer wishes to undertake a complete farm conservation plan. This is the type of service the U. S. Soil Conservation Service technician is prepared to render when called in on the job by the district directors.

The soil conservation programs of New York, New Jersey and Delaware are being worked out on the land of these three Delaware Basin states in soil conservation districts with the active assistance of these complementary agencies. In every state in the country similar soil conservation projects are underway. Already there are more than 1900 soil conservation districts in the United States, comprising more than three-quarters of the nation's

farmland.

Only in Pennsylvania do we find evidence of action which is designed to thwart, obstructand defeat the program. Although it is the duty of Pennsylvania's Agricultural Extension Service to contribute to the State's Soil conservation program, it has acted in a deliberately obstructive manner.

It was largely on account of the Extension Service's criticism of the 1937 Soil Conservation law that it was repealed and a new statute, removing the feature objected to, was passed in 1945 with that agency's assistance. The people of Pennsylvania and their government, therefore, had every reason to expect the full endorsement and active cooperation of the Extension Service in the district program envisioned by the act which it had helped to draft.

Paradoxically, the Extension Service has failed to carry out the intent and mandate of the people as embraced in the 1945 State Soil Conservation Act. This is a source of great disappointment and defies explanation. It can only be regarded as a disservice to Pennsylvania agriculture.

As far as is known, never has a county agricultural extension agent publicly advocated the formation of a soil conservation district in Pennsylvania. To the contrary, much information is on hand to indicate that the Extension Service has obstructed the formation of districts wherever possible by underhanded and unbecoming tactics.

INCODEL investigation has shown that in Bucks County, Pennsylvania, a committee representing the farmers informed the county commissioners that a substantial proportion of rural landowners wanted a soil conservation district. But the Commissioners, obviously misled by the representative of the Extension Service, made no attempt to verify this claim. Instead they directed the county clerk to reply to the group as follows:

> "The County Commissioners have instructed me to advise you that ....after hearing of the work that Mr. Greenawalt of the Extension Service is doing, they feel they cannot create a district for Bucks County, as they believe this work can be satisfactorily carried out through the Agricultural Extension Association."

Early last year, the Northampton County agent sent out a four-page letter to the farmers subtly expressing objections to a movement to establish a district in that County.

Among the claims he made in favor of the exclusive continuance of the Extension Service's educational program was one to the effect that no farmer in the County had suffered from lack of information or assistance in establishing soil conservation practices. In support, he stated that the Extension Service has in process or completed fifty-one soil control demonstrations.

The value of such demonstrations cannot be questioned. But to boast about fifty-one layouts during a period of ten years or more, out of more than 2400 farms, as an adequate soil conservation program is simply ridiculous. The accomplishments of the infant soil conservation district in neighboring Lehigh County puts this record of the Northampton County Extension Service to shame. In its first two months of activity, this Lehigh district installed eight complete farm conservation plans covering 719 acres, and at the end of 1947 complete soil and water conservation plans were prepared by the Soil Conservation Service technician for 42 cooperating farmers on 4,141 acres. These are complete farm plans involving 22 different land management practices that are found applicable and desirable after careful field-by-field inspection and study. They are tailored conservation plans for each individual farm. One or more of the conservation practices recommended have already been established on 35 of the 42 Lehigh County farms. In addition, land use capability surveys have been made and detailed soil maps prepared for 106 Lehigh farms totaling 10,953 acres. These surveys provide preliminary information basic to sound planning.

It is not my purpose in citing these examples to discredit the work of the Extension Service or the County Agent. I have always had the highest regard for the Northampton County Agent. His character, industry and ideals of good citizenship command the highest respect. It is only on this one issue that I am not in accord and I prefer to think that his attitude in this matter stems from that emanating at the higher administrative level rather than from his own personal conviction. In any event, the attitude I am challenging is known to permeate the entire state. I want it to be definitely understood that in all other respects I think the Extension Service is doing a fine job. But, its failure to recognize the enormity of the task of keeping the soil on the land where it belongs, its refusal to embrace the principle of cooperation for greater accomplishment, and the lame excuses which it offers in explanation of its reactionary attitude with respect to the soil conservation district program cannot be dondoned.

In another paragraph in the letter, the agent wrote:

> "Prevention of soil erosion or soil conservation or whatever its name is called...should continue to be clearly recognized as being in the field of Agricultural Extension Service activities."

I need not point out to anyone the fact that the writer was declaring that the Pennsylvania Extension Service desires a monopoly in this field. Certainly there is no room for such action, especially on the part of an institution for public service activity, where the common good of ten million persons and the generations which will follow is the only consideration.

To continue the letter, the agent said:

> "Let me assure you that if the County Commissioners find that a majority of the farmers in the County desire this new set-up, I shall not oppose."

Why the writer should even consider opposing the will of the majority of farmers in Northampton County is not understandable. I do not believe he intended to leave that impression. What he undoubtedly meant was that he would oppose the formation of a district by every means at his disposal.

Subsequent actions bear that out. Immediately after a group of Northampton County farmers formed the "Committee for a Soil Conservation District in Northampton County", a counter committee was established by the Extension Service representative, ostensibly to act in an advisory capacity to the County Agent on matters pertaining to soil conservation.

It should be stated that the Committee favoring the District plan worked in the open. Its first act was to mail out two informative open letters and a set of questions and answers about soil conservation districts. At no time did the Committee speak disparagingly of the Agent or the Extension Service. As a matter of fact, the Committee Chairman spent over an hour with the County Agent to acquaint him with the details of the Committee's program. Two days later, he was astounded to receive an exceedingly contentious letter from the same County agent. This letter contained many misleading statements purporting to attest to the general inefficiency and unproductiveness of the Soil Conservation Service.

Perverting his prerogative in rural education, the Agent mailed copies of his unfair propagandistic letter to many farmers throughout the County.

In the letter, the Agent deliberately misrepresented the facts through use of a quotation which made it appear that the Pennsylvania Conservation Law of 1945 gave districts the "power to compel proper land use."

In another paragraph he quoted testimony delivered before the House Appropriations Committee in Washington indicating that the U. S. Soil Conservation Service is grossly inefficient and extravagant. To suggest that farmers oppose the development of a district based on this testimony, which

was thoroughly refuted at the same hearing, is not exactly fair play.

Shortly after receipt of the letter, a meeting to start the circulation of a petition was called by the "Committee for a District in Northampton County". To judge by results, the Extension Service counter committee had not left a stone unturned in organizing opposition.

The meeting was opened with a statement by the chairman to the effect that, as it had been advertised as a meeting of farmers who favored a district, he assumed the estimated 150 persons present wanted a district. One of the farmers was immediately on his feet, shouting that he questioned the statement and called for a rising vote. More than half of the group present arose to the complete bewilderment of the Committee which was completely unprepared for such a demonstration of pre-arranged opposition.

The opposition held the floor to state and re-state its objections. They claimed that outside pressure groups were trying to ram a district which was not wanted down their throats. They claimed that District programs were regulatory. They claimed that district programs would duplicate the work of Extension Service. They claimed that the creation of a district would raise local taxes. They claimed that circulating a petition was undemocratic. They succeeded in their mission to disrupt the meeting and thereby create publicity that gave farmers who were not present, as well as the general public, the impression that the proposition, which was already endorsed by almost 300 farmers in the county, was a horrible hoax, the utmost in bureaucratic promotion, and totally distasteful to the farmer.

I am told that these charges against districts are familiar to those who have worked in agriculture in Pennsylvania during the last ten years. That there is not a grain of truth in them is clear to anyone acquainted with the law and the workings of Soil Conservation Districts.

The Pennsylvania Extension Service, following this same pattern, is deliberately handing out misinformation on the subject in every county where farmers attempt to arouse interest in a district. Its strategy is manifestly designed to prevent formation of soil conservation districts by stimulating FEAR. This record of Pennsylvania Extension Service's program of rural education in soil conservation is, to say the least, a shocking dereliction of responsibility and deliberate misuse of public trust.

The work of the Extension Service as established by law is primarily educational by nature. That work must be continued and extended. Unquestionably, an enormous amount of effort must be expended in order to bring about changes in people's thinking regarding proper soil management and use. Farmers need the leadership which the Extension Service, with its deep-rooted connections can best provide to develop interest in soil conservation districts by educational methods. And this experienced leadership is sorely needed by farmer directors of organized districts in visualizing their over-all county conservation job.

I am sure INCODEL knows that no other serious obstacle exists to the rapid formation of districts in the Pennsylvania Section of the Delaware Basin. And it must also know that no other serious obstacle remains in the way of rapid cooperation between farmers and already established districts.

The Interstate Commission on the Delaware River Basin cannot develop a complete Delaware Basin program to integrate the soil conservation programs of the four states of the Basin, nor can the Lehigh Valley Flood Control Council accomplish its objective in this important field, until the Extension Service of the Pennsylvania State College abandons its backward philosophy and adopts a policy conforming to that of the Commonwealth. To this end, we can all heartily endorse, with one reservation, the recommendations of the Pennsylvania State Planning Board published in September, 1947.

The first recommendation is:

1. That the county farm agents of the Agricultural Extension Service of the Pennsylvania State College, in cooperation with the Pennsylvania Soil Conservation Commission, be entrusted with full responsibility for demonstration of the need for Soil Conservation Districts in all the agricultural counties of the Commonwealth.

In view of the foregoing discussion it naturally follows that the Extension Service should be called upon to abandon its present attitude toward the soil conservation district program before it be entrusted with full responsibility to promote it. In fact, the State Planning Board itself has recognized that a distinct change in attitude is necessary. In the report of May, 1947 issued by the Conservation Committee of the State Planning Board and the Postwar Planning Commission, entitled "A Conservation Program for Pennsylvania", it is clearly stated that the present situation is "ineffective, wasteful and mutually unsatisfactory" and recommended that the Governor, the Board of Trustees of State College and the State Soil Conservation Commission meet in joint conference to resolve the question, after which all state agencies should be expected to support the policy agreed upon. This recommendation is even more significant when we recall that the chairman of the committee making this recommendation was Dr. Fletcher, former Dean of the School of Agriculture at State College, a man who certainly was aware of the uncooperative attitude of the Extension Service.

The second and third recommendations of the State Planning Board are particularly salutary, and should be endorsed without reservation. They read as follows:

2. That when and wherever such districts are established, the Soil Conservation Commission shall work out and put into effect with the directors of the districts a cooperative arrangement between

the Agricultural Extension Service and the United States Soil Conservation Service for such types of technical assistance and material aid as each of these agencies is able to provide to make soil conservation practices in the districts most effective.

3. That additional personnel and facilities be provided to enable the Agricultural Experiment Station and the Department of Agronomy of the School of Agriculture, Pennsylvania State College, to expand their program of investigation into the farm problems of the State and the improvement of farm practices, and also to complete the Vitally important survey of our soil resources.

More important at the moment, I think, is the suggestion that the Extension Service avoid any time-killing tactics by coming to a quick decision on the vital policy question of whether or not it will further oppose the district program envisioned by the 1945 State Soil Conservation Act.

The Extension Service should be called upon to either (1) categorically deny its opposition to the district program and submit proof that it is supporting the intent of the Act, or (2) come out in the open and fully and explicitly state its reasons why it cannot support the program enacted by our State Legislature.

Governor Duff, in his inaugural address emphasized the need for much more conservation activity in Pennsylvania. Unless the Pennsylvania State College Extension Service with all its influence, joins forces with all qualified agencies - local, state and federal - in implementing the program enunciated by the Governor, it must take whatever blame descends upon it for setting that vitally important program adrift and making of a well-intended declaration of administration policy, a helpless gesture.

Putting the recommendations of the State Planning Board into play will spell the end to the slow down in Soil Conservation in Pennsylvania. The time for positive, constructive, coordinated action has arrived. Let's all pull together from now on.

INCODEL'S INTEREST IN THE NATIONAL WATER CONSERVATION CONFERENCE

Summary of Address By

Judge Clifford H. Stone, Director, Colorado Water Conservation Board, Denver, Colorado

at

Bellevue Stratford Hotel
Philadelphia, Pennsylvania
January 15, 1948

* * * * *

Judge Clifford H. Stone, Director of National Water Conservation Conference, presented an excellent extemporaneous talk on the topic, "Incodel's Interest in the National Water Conservation Conference".

As introduction, Judge Stone referred to Incodel's leadership in participating in the successful campaign staged in 1944 for the inclusion of a Congressional declaration of policy in the then pending flood control and river and harbor bills for the recognition and protection of the interest and responsibilities of local and State governments in the matter of formulation of federal projects for the use and control of the water resources in the nation.

This campaign led to the formation of a loosely knit group of representatives of water resources agencies from twenty-nine States, which called itself the Water Conservation Conference. Operating through a Continuing Committee, the Conference, in addition to its campaign for improvement in federal-state relationships, raised its voice against proposals to blanket the nation with federally controlled authorities in charge of three-men boards appointed by the President and empowered, if they should choose to do so, to disregard the interest and wishes of State and local governments in the

development of river basins.

Judge Stone then made reference to the decision of the Continuing Committee to call another general meeting last September (1947) at Kansas City, at which the accomplishments of the group could be reviewed and programs formulated for its continuance. As a result of this decision, the Conference was formally organized at the Kansas City meeting as the National Water Conservation Conference and adopted an overall action program, featured by a "number one" item to call upon the Congress to set up appropriate machinery that would lead to the formulation and adoption of a sound national land and water policy embodying principles and standards for the operation of federal agencies, legislative and executive, in the development of the nation's land and water resources.

Judge Stone, in a convincing and forceful manner, cited many instances showing the sta te of confusion which now exists in this field on the federal level. He emphasized the fact that the Conference had no axe to grind, was not lobbying for the authorization of any specific water project or program, but was primarily interested in assisting in bringing about the acceptance of sensible procedures for the development of the resources of the nation, particularly on a river basin standard. Judge Stone spoke highly of progress being made by Incodel in developing programs for the Delaware Basin and asserted that these activities, coupled with its interest in the broader problem of a national policy, represented a tremendously vital service to the country.

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THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

REGISTRATION LIST

1948 MIDWINTER MEETING

Bellevue-Stratford Hotel, Philadelphia, Pa.
January 15, 1948

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