

PRELIMINARY DRAFT OF ACT UNDER WHICH WATER
SUPPLY DIVERSION PROJECTS MAY BE MADE

Interstate commission on the
Delaware River basin
1941



CONFIDENTIAL

PRELIMINARY DRAFT OF A PROPOSED CONCURRENT ACT
ESTABLISHING CONDITIONS UNDER WHICH
WATER SUPPLY DIVERSION PROJECTS MAY BE MADE
IN THE DELAWARE RIVER BASIN

December 1, 1941

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PRELIMINARY DRAFT OF A PROPOSED CONCURRENT ACT ESTABLISHINGCONDITIONS UNDER WHICH WATER SUPPLY DIVERSION PROJECTSMAY BE MADE IN THE DELAWARE RIVER BASIN

No. —

AN ACT

To promote interstate cooperation for the conservation and protection of the water resources in the Delaware River Basin and, consistent with such object, to enable the Commonwealth of Pennsylvania, in common with the states of New Jersey and New York, to make use of a part of the waters thereof for the purpose of meeting present and reasonable prospective needs for domestic and municipal water supply purposes.

The general assembly of the Commonwealth hereby enacts as follows:

ARTICLE IDEFINITIONS.

For the purpose of this Act, the following terms and expressions shall have the meanings ascribed to them in this section, unless the context clearly indicates otherwise.

"c.f.s.": The abbreviation for "cubic feet per second".

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

"Delaware River": That reach of the main stream which extends from the confluence of the West Branch and the East Branch of the Delaware River, near Hancock, New York, to the point where it passes the boundary line between the states of Delaware and Pennsylvania.

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"Delaware River Basin": The total area drained by the Delaware River.

"Waters of the Delaware River" or "Waters of the Delaware River Basin":

The surface waters originating within the Delaware River Basin.

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

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

"Lower Basin": That part of the Delaware River Basin which is not embraced within the Upper Basin.

"Tributary" or "Tributary of the Delaware River": Any watercourse the waters of which naturally flow into the channel of the Delaware River.

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

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

- (a) If taken from a tributary, such water is returned, but not in such a manner as to be available in the channel at the confluence of such tributary and the Delaware River.
- (b) If taken from the Delaware River, such water is returned, but not above a point twelve miles below the point of taking, as measured along the center line of the channel.

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"Divert": To effect a complete diversion or a partial diversion.

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

"Develop": To make available by development.

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

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

"Natural Flow": The actual flow of the river or tributary in practically the natural state, unaffected by any developments or works of man except such as would not materially alter the flow characteristics of the stream.

"Actual Flow of the Delaware River": The existing flow of the Delaware River uncorrected for the effects of any developments or works of man, excepting for the effect of diversions around the point of development.

"Control Rate": That rate of flow in c.s.m. below which the natural flow of the tributary under consideration occurs the same percentage of time as flows of less than a specified rate occur in the Delaware River at Trenton. In determining the specific control rates defined below, a common period of comparison, not less than ten years in extent, for both the tributary under consideration and for the Delaware River at Trenton shall be analyzed. Flows in the Delaware River at Trenton shall be corrected for diversions around the gauging station at that location.

"4000 c.f.s. Control Rate": The control rate of the tributary under consideration which corresponds with 4000 c.f.s. in the Delaware River at Trenton.

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ARTICLE IV

GENERAL CONDITIONS

For the purpose of securing water for domestic and municipal water supply, the Commonwealth, subject to the provisions of this Act, may divert water from any tributary of the Delaware River within the state, or from the channel of the Delaware River within the state, or from both, for use anywhere within the state either within or without the Delaware River Basin, provided:

1. That all works constructed for the purpose of securing such water shall be built in accordance with the legislative requirements governing such matters in the state, and;
2. That every development for the diversion of water shall be so constructed as to effect the greatest economy in the use and conservation of the waters of the Delaware River and its tributaries consistent with reasonableness and practicability; and,
3. That every development for the diversion of water shall comply with the conditions and limitations set forth in Articles V and VI of this Act.

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ARTICLE V

RULES GOVERNING DIVERSIONS FROM

DEVELOPMENTS ON TRIBUTARIES OF THE DELAWARE RIVER

Complete Diversions

In the case of any projects for the complete diversion of water from tributaries of the Delaware River for domestic and municipal water supply purposes, the following conditions shall apply:

1. Whenever the natural flow of the tributary under development, at its point of development, exceeds its "4000 c.f.s. control rate" any part of such natural flow may be withheld in storage in reservoirs on, or may be withdrawn directly from, such tributary, and be diverted.
2. Whenever the natural flow of the tributary under development, at its point of development, falls below its "4000 c.f.s. control rate" the flow of the tributary immediately below the point of development shall be maintained as follows:
 - (a) Whenever the natural flow of the tributary falls below its "2500 c.f.s. control rate", the rate of flow required to be maintained shall be fifty (50) per cent of the long-term-average-yield of the stream, if in the Upper Basin; and forty(40) per cent of the long-term-average-yield of the stream, if in the Lower Basin.

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- (b) Whenever the natural flow of the tributary is between its "2500 c.f.s. control rate" and its "4000 c.f.s. control rate", the rate of flow required to be maintained shall be twenty-five (25) per cent of the long-term-average-yield of the stream, if in the Upper Basin; and twenty (20) per cent of the long-term-average-yield of the stream, if in the Lower Basin.

B. Partial Diversions

In the case of any project for the partial diversion of water from tributaries of the Delaware River for domestic and municipal water supply purposes the following conditions shall apply:

1. Whenever the natural flow of the tributary under development at its point of development exceeds its "3400 c.f.s. control rate" any part of such natural flow may be withheld in storage reservoirs on, or may be withdrawn from, such tributary, and be diverted.
2. Whenever the natural flow of the tributary under development at its point of development, falls below its "3400 c.f.s. control rate", the flow of the tributary immediately below its point of development shall be maintained at a rate at least equal to said natural flow during the time it is below the "3400 c.f.s. control rate".

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ARTICLE VI
RULES GOVERNING DIVERSIONS FROM
DEVELOPMENTS ON THE DELAWARE RIVER

Complete Diversions

In the case of any project for the complete diversion of water from the channel of the Delaware River for domestic and municipal water purposes, the following conditions shall apply:

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

$R = DYK$ in which

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

"D" represents the drainage area in square miles which would have been required to be developed on tributaries within the Delaware River Basin in the state involved in order to yield the same quantity of water as is being developed by the project on the river.

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

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

B. Partial Diversions:

The Commonwealth, in common with the States of New Jersey and New York, recognizes that no single set of conditions for a project for the partial diversion of water from the channel of the Delaware River for domestic and municipal water supply purposes is practical for all parts of the river due to the many variable factors involved. Accordingly, specific rules governing partial diversions from the channel of the Delaware River are not included herein; and no partial diversion may be made from the channel of the Delaware River under the terms of this Act unless and until conditions governing the operation thereof have been formulated and approved in the manner prescribed under Article VII of this Act.

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ARTICLE VII

ADMINISTRATION

The Water and Power Resources Board of the Department of Forests and Waters is hereby empowered and directed to apply and carry into effect the proposals, terms, and provisions of this Act within the territorial limits of this state.

The Water and Power Resources Board of the Department of Forests and Waters is hereby authorized and directed to approve, adopt, and enforce within this state such reasonable modifications, changes, or alterations to the provisions of Articles V and VI as may be desirable to better carry out the purposes of the Act; namely, to enable the Commonwealth, in common with the states of New Jersey and New York to equitably use the waters of the Delaware River Basin to meet present and reasonably prospective needs for domestic and municipal water supply in a manner which will not cause substantial damage to interests below the point of diversion; provided that any modifications, changes or alterations shall have been approved and agreed to by the administrative agencies delegated by the states of New Jersey and New York.

The Water and Power Resources Board of the Department of Forests and Waters is hereby authorized and directed to formulate conditions governing projects involving the partial diversion of water from the channel of the Delaware River for which no specific standards are provided for under Article V. Such conditions shall be in harmony with the intent and purpose of this Act and, upon approval of and agreement to by the administrative agencies delegated by the States of New Jersey and New York shall be thereupon in full force and effect.

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ARTICLE VIII

THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN

The Interstate Commission on the Delaware River Basin, having been recognized by the States of Delaware, New Jersey, New York, and Pennsylvania as the duly established regional commission or agency for intergovernmental cooperation among the states which are constituent to the Delaware River Basin in effectuating the conservation, protection, and development of the water resources of the Delaware River Basin, is hereby designated the agency through which the Commonwealth may refer questions for recommendation and report, in case situations arise in which uniform agreement as to the intent of this Act, or uniform agreement as to the determination of the value of factors involved in the Rules Governing Diversions, cannot be reached by the officials of the responsible administrative agencies of the interested states.

Should any diversion project affecting the Delaware River Basin be authorized by the proper authority of this Commonwealth, such action shall be reported by said authority to the Executive Secretary of the Interstate Commission on the Delaware River Basin.

The functions and duties of the Commission, in addition to those hereinbefore set forth, shall be:

1. To make rules and regulations for the organization and conduct of such of its business as is related to this Act.
2. To report at intervals of not more than two years to the Governor and to the Legislature of this Commonwealth as to developments which have taken place under the terms of this Act and as to such other matters as may come within its purview.
3. To recommend the installation and maintenance of adequate and suitable equipment for measuring all quantities and rates of water flow which are necessary to evidence that the provisions of this Act are being fulfilled.

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4. To observe the operation of all developments; and to recommend such conditions as may be necessary to secure compliance with the provisions of this Act.
5. To recommend whether the quantity of water proposed for development and use of any state constituent to the Basin is fair and equitable.
6. To recommend the manner in which the quantity of water which may be diverted from the channel of the Delaware River as set forth under the Rules Governing Diversions in Article VI shall be apportioned to the states. Such specific rules and regulations as may be recommended by the Commission for this purpose shall be based upon the basic principle of providing for an equitable apportionment in accordance with, and for the purpose of meeting, reasonable needs and requirements.
7. To interpret, and to recommend the variation, or modification of, the provisions of this Act in order better to meet exceptional, unusual, unforeseen, or changing conditions, provided that the recommendation regarding such variation, modification, or interpretation shall remain in harmony with the general purpose and intent of this Act, namely, to enable the states which are constituent to the Delaware River Basin to equitably use the waters thereof for the purpose of meeting present and reasonably prospective needs for domestic and municipal water supply in a manner which will not cause substantial damage to interests below the point of diversion.

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8. The Commission or any member thereof or any employee or other person duly authorized thereby is hereby empowered to enter without let or hindrance upon the lands and property upon which any development is proposed or is being constructed, operated or maintained under the provisions of this Act in connection with the performance of their duties under this Act. The appropriate departments of this Commonwealth shall cooperate with the Commission in obtaining such data, information and records as may be necessary in the performance of its duties.

ARTICLE IX

Notwithstanding anything contained in this Act, the Commonwealth may institute any action or proceeding at law or in equity for the enforcement or protection of its rights or the rights of its citizens accruing under this Act or otherwise.

ARTICLE X

Should any part of this Act be held to be contrary to the Constitution of this Commonwealth, or of the States of New Jersey and New York, or of the United States, all other severable parts of this Act shall continue to be in full force and effect.

ARTICLE XI

The terms and provisions of this Act shall become effective when Acts in substantially the same form providing for the establishment of the same conditions under which water supply diversion projects may be made in the Delaware River Basin have been enacted by both the States of New Jersey and New York.

This Act shall take effect immediately.

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INTERSTATE COMMISSION

on the Delaware River Basin

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December 1, 1941

MEMORANDUM

HENDRICKSON

Hon. Ellwood J. Turner, Chairman
The Interstate Commission
on the Delaware River Basin
Philadelphia, Pennsylvania

MISSION

Dear Mr. Turner:

REPRESENTATIVES

PERSON

NEAL

HENDRICKSON

BOARD

INTERSTATE

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INTERSTATE

On March 26, 1941, your Advisory Committee on Quantity of Water submitted to you a Survey and Report containing the Committee's recommendations relative to conditions under which water supply projects involving the diversion of Delaware River waters should be made. At that time, you will recall, the Committee was unanimously agreed upon the recommendations which it reported, except as to the "control rate" for projects involving a "complete diversion" from the main Delaware River. Additionally, however, the Committee did not include any recommendation in reference to conditions to apply to projects involving a "partial diversion" from the main Delaware River; nor any recommendation concerning procedures and policies for the administration of the proposed conditions governing diversions.

ELLO

DO, COMMISSIONER

SON

WARNER

At a Committee meeting held October 23, the three points just recited, which had previously been left in question, were considered further and an agreement was reached. The results of the Committee's decisions regarding these points have been incorporated in the revised report which is respectfully submitted herewith for your consideration. This report is intended to replace Part III (the technical aspects) of our March 26th Survey and Report.

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REPRESENTATIVES

In presenting the present report, your Committee wishes to call attention to several matters. First, you will note we have included the technical results of our study in a document which is in the form of a legislative act which could be concurrently ratified by the three interested states. In doing this, the Committee wishes to be understood as not presuming to suggest the form in which the conditions recommended for diversions should be incorporated into legislation. It is presented in this manner solely for the purpose of providing a means by which the operation of the rules governing diversions might be more or less completely visualized.

Ellwood J. Turner

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December 1, 1941

We also call your attention to item B of Article VI in reference to partial diversions from the main Delaware River. For such diversions, it was impossible for the Committee to set up a single set of standards which would be practical for all cases. The location of the development; the amount of the proposed diversion; the present and prospective uses of the water in the part of the river by-passed; and the character of development of the adjoining lands--all are variable factors which make each possible project a problem which only can be solved equitably after consideration of the actual factors involved in the particular project under consideration.

Article VII-Administration-suggests the duties of administration be delegated, in the case of Pennsylvania, to the Water and Power Resources Board of the Department of Forests and Waters. In New York and New Jersey, similarly, such authority would be delegated to the corresponding water resources agencies in these states.

This Article, by the terms of the second and third paragraphs also gives the officials of the delegated administrative agencies authority to modify the specified provisions of the Rules Governing Diversions and to formulate specific provisions for Partial Diversions from the main Delaware River. In each case this could only be done, however, under the following conditions:

1. Such modifications, or such rules for partial diversions from the River as may be formulated, must conform with the intent and purpose of the rules for diversions, which is to permit the equitable use of the waters of the Delaware Basin for water supply purposes in a manner which will not cause substantial damage to lower interests.
2. Such modifications, or such rules for partial diversions from the River as may be formulated, must be approved and agreed upon by the administrative agencies in all three interested states.

Your Committee believes this delegation of authority to be important and desirable, because it gives the administrative officials of the state water resources agencies the first opportunity to review situations in which issues may be raised that would be difficult to reconcile if the administrative agencies were not consulted. The Committee is of the further opinion that the three administrative agencies would, in all probability, be able to reach a mutually satisfactory agreement in regard to such possible problems.

Ellwood J. Turner

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December 1, 1941

Your Committee is of the opinion that Incodel should be utilized as a board of review and adjustment if, and when, problems occur upon which the administrative agencies, by direct negotiation, cannot agree unanimously. For this purpose your Committee recommends that Incodel should be given authority to review such cases, if they arise, upon request of the state agencies. We feel, however, that the Committee is not the proper agency to recommend whether this function and other possible Incodel duties pertaining to water supply diversion matters, should be set up in the document containing the conditions for diversions, rather than in the acts creating the Commissions on Interstate Cooperation, or in some other manner.

As has been pointed out on previous occasions, your Committee's work, and its recommendations, have been developed without the benefit of legal review. We are of the opinion that a legal consultant should be engaged at an early date for this purpose.

Respectfully submitted,

H. T. Critchlow

Charles E. Ryder

Russell Suter

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