IN THE SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, A.D. 1958

STATES OF WISCONSIN, MINNESOTA, OHIO and THE COMMONWEALTH OF PENNSYLVANIA,

Complainants,

v.

STATE OF ILLINOIS and the SANITARY DISTRICT OF CHICAGO,

Defendants.

No. 2 Original

STATE OF MICHIGAN,

Complainant,

v.

STATE OF ILLINOIS and the SANITARY DISTRICT OF CHICAGO,

Defendants.

No. 3 Original

STATE OF NEW YORK

Complainant,

v.

STATE OF ILLINOIS and the SANITARY DISTRICT OF CHICAGO,

Defendants.

No. 4 Original

REPLY BRIEF OF THE STATES OF WISCONSIN, MINNESOTA, OHIO, COMMONWEALTH OF PENNSYLVANIA, MICHIGAN and NEW YORK IN ANSWER TO DEFENDANTS' BRIEF IN OPPOSITION TO THE AMENDED APPLICATION OF THE COMPLAINANT STATES; and MOTION TO AMEND AND ENLARGE COMPLAINANTS' PRAYER FOR RELIEF IN COMPLAINANTS' AMENDED APPLICATION.

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INDEX

Page

Page

CITATIONS

Statutes

Documents

Constitutional Citations

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To the Honorable the Chief Justices and Associate Justices of the Supreme Court of the United States:

In their brief in opposition to the amended application of the complainant states the defendants set forth certain material and arguments which should be answered.

I

Complainants' charges of operating inefficiency by the Chicago Sanitary District are relevant and well founded.

In defendants' brief in opposition to the Amended Application, Part V, pages 26-27, it is argued that complain-

ants' charges of operating inefficiency are irrelevant and unfounded. We submit that this charge is relevant and that the District does not operate its sewage disposal works as efficiently as possible.

Special Master Charles Evans Hughes, in his Report on Re-Reference, commented:

> "That with efficient operation the proposed sewage disposal plants should attain not less than an annual average of 85% purification of the sewage treated, and that it is probable that the degree of purification will be 90% or more." (Report of Special Master on Re-Reference, Dec. 17, 1929, p. 141)

The Court, in January 1929, speaking through Mr. Chief Justice Taft, had already ruled that the Sanitary District must provide sufficient money, construct and put into operation with all reasonable expedition:

> "adequate plants for the disposition of the sewage through other means than the Lake Diversion." (*Wisconsin et al vs. Illinois, et al.,* 278 U.S. 367, 420-421)

The Court then went on to say that:

> *"Though the restoration of just rights to the complainants will be gradual instead of immediate it must be continuous and as speedy as practicable, and must include everything that is essential to an effective project."* (Emphasis added)

We do not think that the Court ever intended to sanction anything less than the best attainable performance in the operation of the sewage disposal works of the Sanitary

District of Chicago. In 1929 the Master thought that efficient operation of the proposed sewage disposal plant might attain an average annual purification of more than 90%. He was so right. It ill becomes the District that has been denominated one of the seven engineering wonders of America to plead that its low grade performance in 1957, for example, constitutes efficient operation of its sewage disposal plants, and of the West-Southwest plant in particular. This plant is the key plant in its operations and it proved itself capable of attaining a fair degree of efficiency, for example in 1952, when the over-all average was 93.6% of B.O.D. removal. The efficiency in the removal of suspended solids is very poor because the District during the past years has been unable to handle from 200 to 250 tons of solids per day in its plant and such solids had to be disposed of by other means, presumably by dumping them into the Canal. (See Engineering News-Record Nov. 27, 1958). H. P. Ramey, Chief Engineer for the District, has stated that:

> "The highest degree of sewage treatment, on an annual average basis, which can be expected from the sanitary district plants, or from any plant is 90 percent." (Senate Hearings, Committee on Public Works, on H.R. 2 and 1123; (1958) p. 121)

A former President of the Board of Trustees, Chicago Sanitary District, the late Anthony Olis, testified before the Senate Subcommittee on Public Works, on H.R. 3210, in 1956 as follows:

> "The fact is that since April 1950, the sewage of this entire metropolitan area has been given complete treatment to the highest degree practicable in the most modern treatment system in the country." (Senate Hearings, July 5 and 13, 1956, p. 24).

At these same 1956 hearings Casimer Griglik, Trustee, Chicago Sanitary District, testified that:

> "Our engineers tell us that the highest degree of treatment is about 90 percent." (Senate Hearings on H.R. 3210 and S. 2550, July 5 and 13, 1956, p. 28)

The foregoing testimony indicates the attitude of the officials of the Sanitary District regarding their obligation to the Court to operate adequate sewage disposal plants for the disposition of the sewage of the district *through other means than Lake Diversion.* Other communities' sewage disposal plants attain an efficiency of 95%.

Reading Special Master Hughes' conclusion in the light of the rule laid down by the Court, it is crystal clear that neither the Court nor the Master ever intended that an efficiency of 85% of purification would be satisfactory when the District could attain an efficiency of 94% or 95%. The steady drop in efficiency from 93.6% B.O.D. removal in 1952 to 85.6% B.O.D. removal in 1957 indicates inefficient operation, with the only excuse that between 1954 and 1957 the low percentages were partially attributable to interruptions in complete treatment during the installation of new equipment. The data furnished to Senator Alexander Wiley by the Chicago Sanitary District indicates that the installation of new equipment mentioned as an excuse for the sharp drop in efficiency in the operations of the District's sewage disposal plants from the year 1952 to 1957 was probably the "aeration tanks installed in 1958." (See Congressional Record, March 18, 1959) The fact is that any interruption in installation of equipment should have no appreciable effect on the efficiency of operations, if properly planned, and certainly would not drop the efficiency in B.O.D. and

suspended solids reduction as sharply as it did from 1952 to 1957.

The truth of the matter is that the Sanitary District had always been, and still is, obsessed with two ideas, namely; to economize as much as possible, regardless of the fact that the efficiency of its operations might be impaired, and second, the determination that thereby more lake diversion will be obtained for sanitary purposes. This, notwithstanding the ruling of this court that adequate plants must be constructed and put in operation by the District with all reasonable expedition for the disposition of the sewage *through other means than the Lake Diversion* and that these works must include everything that is essential to an effective project. The Court also held that diversion for sanitation sewage disposal is illegal.

When the District chose the dilution method of sewage disposal the main reason was to save expense. (See pp. 1800-1820, Part 2, House Rivers and Harbors Committee Hearings, May and April, 1924.) This policy of the District was continued from the early days, as is noted in the so-called Warren Report, Report of the Board of Engineers for Rivers and Harbors, U. S. Army, Corps of Engineers:

> "115. The district can no longer fairly plead the absence or the impracticability of other safer methods of handling sewage and of protecting its people from water-borne diseases. Certainly, for the past 20 years, expert opinion has held disposal by dilution to be inferior to other methods of treating sewage, and enlightened public opinion has condemned a policy which, in effect, is the transfer of a nuisance from our own front door to that of our neighbor. Large cities on the Great Lakes cannot safely drink raw

lake water, nor should they discharge unscreened and unfiltered sewage either into the lakes or into tributary streams. In 1915, the Chicago Real Estate Board employed three experts, of whom two were of acknowledged eminence in England, and the third a New York expert of well known authority, to investigate the sewage problem of Chicago and to present their views as to the best way of solving it. Their report entitled 'A Report to the Chicago Real Estate Board on the Disposal of the Sewage and the Protection of the Water Supply of Chicago, Illinois,' by Messrs. Soper, Watson and Martin, has been printed, and its conclusions are, therefore, well known to the public in general, and particularly to the people of Chicago whom they advised substantially in accordance with the views above expressed. *Chicago is, therefore, debarred from any claim for indulgence as to work done and expenditures incurred in recent years. If, in defiance of the opposition of the Government, and in open disregard of the law, the officials of the Chicago Sanitary District have continued to expend the money of their constituents in the prosecution of unwise and illegal plans, these officials and their constituency are to blame, and they should expect no great indulgence from the general public whose government they have ignored and whose interests they have disregarded.''* (Exhibit 3, p. 55, par. 115, filed in the 1926-27 Hearings before Special Master Charles Evans Hughes; see Joint Abstract of Record, filed January 24, 1928, pp. 1956) (Emphasis added)

Clearly, the Court never intended to approve mere mediocre or average performance in the operations of the Sanitary District. 85% reduction in B.O.D. is not enough when 94% or 95% can be obtained with top efficiency by the

Sanitary District. As a matter of fact, the North Side Plant of the Sanitary District in the years 1939 to 1946, inclusive, attained a reported average between 93.5% to 94.9% B.O.D. removal. In 1955, the District obtained a reduction in B.O.D. at the North Side Plant of 93.4%. (See printed Annual Report of the Chicago Sanitary District for 1955, p. 547). In 1958, the Sanitary District obtained the following degree of purification: Removal of B.O.D.; Entire district (weighed average) 90.4 percent; Removal of solids, 88 percent. In April, May and June 1958, the removal of solids at the West-Southwest Plant was low (83.4%) because aeration tanks were out of service for construction. See Congressional Record March 18, 1959, p. 4022. The full data on operation of the Sanitary District's works is not published in every printed annual report. In the five printed annual reports from 1951 through 1955, data only on the North Side Plant and the Calumet plant for 1955 was given.

The efficiency of sewage treatment at certain sewage disposal plants located on the Great Lakes is shown in the following tabulations:

MILWAUKEE, WISCONSIN

	Original Plant (West)		Plant Extension (East)	
Year	B.O.D. (Removal %)	Suspended Solids (Removal %)	B.O.D. (Removal %)	Suspended Solids (Removal %)
1948	94.5	92.1	95.3	94.1
1949	95.0	92.2	95.5	93.7
1950	95.2	92.8	95.9	94.4
1951	94.2	92.8	94.0	94.7
1952	94.0	92.0	94.5	94.2
1953	95.0	93.3	94.6	93.8
1954	93.9	93.4	93.9	94.4
1955	95.6	93.8	94.2	93.3
1956	96.1	94.4	95.4	93.8
1957	95.3	94.7	94.6	94.3

GARY, ILLINOIS

Year	B.O.D. (Removal %)	Suspended Solids (Removal %)
1948	95.24	98.31
1949	94.23	98.24
1950	89.01	93.87
1951	95.48	96.90
1952	93.01	92.92
1953	90.15	92.84
1954	88.47	92.78
1955	86.94	94.47
1956	92.00	91.38
1957	91.25	95.23

CLEVELAND, OHIO

(Easterly Plant)

Year	B.O.D. (Removal %)	Suspended Solids (Removal %)
1946	94.8	94.9
1947	95.5	95.0
1948	92.6	91.0
1949	95.2	90.0
1950	93.1	91.5
1951	90.1	88.4
1952	90.8	93.4
1953	92.2	94.5
1954	93.0	94.3
1955	90.2	93.0

CHICAGO SANITARY DISTRICT

(North Side Plant)

Year	B.O.D. (Removal %)	Suspended Solids (Removal %)
1939	93.5	
1940	94.6	
1941	94.9	(Information was not
1942	94.5	furnished on basis of
1943	93.5	percentage removal of
1944	94.9	suspended solids).
1945	93.5	
1946	94.7	

It is palpably evident from the facts which the complainants have been able with great difficulty to assemble — that the Sanitary District has over the years been engaged in a game of "double play". On one hand it represents to the world that it is operating one of the most efficient sewage treatment plants in the country — called the Seventh Wonder of American Engineering (despite the fact that it engages in unorthodox practices not countenanced by other major municipalities)—and then, on the other hand holds up its inefficiencies and deficiencies as the basis for insisting that it needs more fresh water diverted from Lake Michigan and for insisting that it cannot return its effluent to the Lake as is done by every single municipality on the Great Lakes.

The only inference which the complainant states can draw from this "double standard" of conduct is that the officials from Chicago and its suburbs want to reap an economic advantage over the other Lake States with which to attract more industry and population, accomplishing this by a cheaper method of sewage disposal by *dilution* instead of the more costly method of *treatment* — which entails, of course, the abstraction of more fresh water from Lake Michigan.

It has been the position of the complainant states throughout these proceedings that this Court should put a stop to this unlawful and harmful waste of water from the Great Lakes Basin by compelling the Metropolitan Sanitary District of Greater Chicago to increase its efficiency so that *no diverted water whatever need be introduced into the Canal, or so that in case it is found feasible to do so, the treated effluent be returned to Lake Michigan as is done by all other municipalities on the Great Lakes.*

II

In addition to other suitable measures, universal metering of the Chicago domestic water supply would increase the efficiency of operating the sewage disposal plants.

According to the "Report Upon Adequate Water Supply for the Chicago Metropolitan Area, 1955 to 1970", by Alvord, Burdick & Howson, only 27% of the services of the Chicago Department of Water are metered (Table IV-1). 47.5% of the total Chicago pumpage of water is metered, while 52.4% of the city of Chicago and the suburbs, (which use Chicago water) water pumpage is metered. These figures are for the year 1954. According to the 1957 Annual Report of the Chicago Department of Water and Sewers, 46.83% of the Chicago pumpage is metered.

The above figures indicate that to a large extent the domestic pumpage of the city of Chicago and the 51 suburban communities served by the Chicago Water Department either directly or indirectly, is not metered. Universal metering in the city of Chicago would reduce the amount of water consumed. This has been the experience in most of the American cities where the water services were metered.

Metering of the Chicago domestic water supply has been advocated for many years. In the so-called Soper Report, made in 1915, entitled "A Report to the Chicago Real Estate Board on the Disposal of the Sewage and the Protection of the Water Supply of Chicago, Illinois", a strong recommendation was made that the Chicago water supply be metered. And, in the permit issued by Secretary of War Weeks, dated March 3, 1925, which authorized a temporary diversion of 8500 c.f.s., plus domestic pumpage, (which permit was held null and void by this Court, 278 U.S. 367) a condition was attached that at least 90 per cent of the water services be ultimately metered at the rate of 10 per cent per year. Had this condition been complied with universal metering of the Chicago water supply would have been completed by the year 1935.

In his report dated March 31, 1941 filed in these causes, Special Master Monte M. Lemann commenting on the problem of metering of Chicago's domestic water supply stated (pp. 102-104):

> "To a large extent the domestic water consumption is not metered in Chicago. The opposing States offered in evidence a table showing that the Chicago per capita consumption was 214% above the average of 19 other American cities. Of 412,228 water services in 1940, only 115,025 were metered. *Universal metering would reduce the amount of water consumed. This in turn would reduce the volume of sewage, which would permit a longer period of detention in aeration tanks and increase the amount of sewage which could be given complete treatment.* Reduction in domestic pumpage would, it is true, reduce dilution and the total quantity of B.O.D. in the sewage would remain the same, although less diluted by water. Upon the balance, however, there would be apparently

a substantial gain in the amount of sewage which could be completely treated if the water consumption were diminished. I find no evidence in the record sufficient to enable me to appraise the extent of the benefit which would result. (Emphasis supplied)

"The desirability of limiting water consumption in Chicago has been frequently urged. The permit of the Secretary of War dated March 3, 1925 (which authorized the diversion of not exceeding 8,500 c.f.s. in addition to domestic pumpage) contained a condition that Chicago meter at least 90% of its water services at the rate of 10% per year. The PWA Board of Engineers in its report of April 30, 1934, stated that the 'great and unreasonable waste of water from the Chicago waterworks system' had 'added millions of dollars to the cost of sewage and sewage disposal work,' and recommended that every effort be made to reduce such waste and 'that the capacity of future treatment plants be predicated upon the reasonable use of water.' In August, 1938, an offer of grant from the PWA in connection with the construction of the South Side water filtration plant contained a condition that the City must satisfy the Administrator that it would install approximately 115,260 meters. In the spring of 1939, the City was permitted to defer the installation of the meters until a later date than originally specified.

"Illinois offered evidence through the City Engineer of Chicago that to provide universal metering, 300,000 meters would be required which would cost in excess of $10,000,000 and would require more than 6 years to install if 50,000 meters could be installed each year. In the 10 year period from 1930 through

1939 the City installed 41,564 meters, or an average of 4,156 meters per year. The greatest number of meters placed in any one year was 16,864 in 1931. The City Council of Chicago has made no appropriation for the purchase of meters. If such an appropriation were made, an indefinite delay would be experienced in contracting for and obtaining delivery of meters.

"Mr. Howson testified that he thought it would be practicable to put in 30,000 to 50,000 meters in one year's time. Even at this rate, it would take 6 to 10 years to accomplish the metering; and the opinion of one man is not a sufficient basis for a finding that the indicated rate of progress could be made.

"The matter of the metering of Chicago's water supply was discussed in the report of Special Master Hughes on the re-reference.[1] It was there pointed out that the City of Chicago was not a party to this proceeding and its entry as a party had been successfully resisted by the complainants; that the City had the riparian right to take water from Lake Michigan for the ordinary use of its inhabitants and that if it was sought to prevent an abuse of that right through the taking of an unreasonable amount, it would be necessary to present that issue in an appropriate manner. It is true that the point is presented here in a somewhat different aspect, because upon the re-reference the contention was that Chicago should be required to return to the Lake the water which it was withdrawing for domestic pumpage, *whereas in the present hearing it is contended that the reduction of the water consumption of Chicago by metering*

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[1] See report on re-reference (1929), p. 120.

is an ameliorative measure which is open to Illinois as a substitute for increased diversion from the Lake. The considerations referred to by Special Master Hughes would, however, appear to have force also in connection with the issues now presented."

Here again the complainant states can draw only one inference from these policies which the Chicago officials (both in the City and the Sanitary District) have pursued, and that is that they want to abstract as large a quantity of fresh water from Lake Michigan as possible. This "waste" of water so much needed to maintain depth in the shallow connecting channels of the great Lakes not only reduces the efficiency of their sewage treatment plants *but permits them to generate more electricity at their plant at Lockport.* This, in turn, unlawfully deprives the Great Lakes States, particularly New York and Canada, of the use of this "wasted water" for production of hydroelectric power at Niagara and the International Rapids.

Universal metering of the Chicago domestic water supply would reduce the amount of water consumed, and this in turn would reduce the volume of sewage which would permit a longer period of detention in the Sanitary Districts' aeration tanks and thus increase the amount of sewage which could be given full treatment. A reduction in the per capita use of Chicago water would permit a larger amount of sewage to be given complete treatment. A cut in the amount of Chicago domestic sewage flow would make available more capacity in the sewage treatment plants for storm water in the intercepting sewers and would also extend the useful life of the District's sewage disposal plants.

It is manifest that the efficiency of the Sanitary Dis-

trict's plants could be increased by universal metering of the Chicago domestic pumpage.

III (a)

The injunctive relief sought by complainants does not conflict with the Rivers and Harbors Act of July 3, 1930 (c847, 46 Stats. 929).

The Rivers and Harbors Act of July 3, 1930 (c847, 46 Stats. 929) provides in part as follows:

> "Illinois River, Illinois, in accordance with the report of the Chief of Engineers, submitted in Senate Document Numbered 126, Seventy-first Congress, second session, and subject to the conditions set forth in his report in said document, but the said project shall be so constructed as to require the smallest flow of water with which said project can be practically accomplished, in the development of a commercially useful waterway: Provided, That there is hereby authorized to be appropriated for this project a sum not to exceed $7,500,000: *Provided further, That the water authorized at Lockport, Illinois, by the decree of the Supreme Court of the United States, rendered April 21, 1930, and reported in volume 281, United States Reports, in Cases Numbered 7, 11, and 12 Original — October term, 1929, of Wisconsin and others against Illinois and others, and New York against Illinois and others, according to the opinion of the court in the cases reported as Wisconsin against Illinois, in volume 281, United States, page 179, is hereby authorized to be used for the navigation of said waterway:* Provided further, That as soon as practicable after the Illinois waterway shall have been completed in accordance with this Act, the Secretary of War

shall cause a study of the amount of water that will be required as an annual average flow to meet the needs of a commercially useful waterway as defined in said Senate document, and shall, on or before January 31, 1938, report to the Congress the results of such study with his recommendations as to the minimum amount of such flow that will be required annually to meet the needs of such waterway and that will not substantially injure the existing navigation on the Great Lakes to the end that Congress may take such action as it may deem advisable." (Emphasis added)

An analysis of the above pertinent provisions of the Act of July 3, 1930, make it plain that all that Congress did was to permit *"the water authorized by the Supreme Court of the United States"*, by its decree of April 21, 1930 *"to be used for navigation of said waterway"*. That act of Congress does not authorize any withdrawal of water from Lake Michigan whatsoever. *The Act is clear and unambiguous.* It recognizes the authority of the Court insofar as the amount of diversion is concerned. All that Congress says in the Act of July 3, 1930 is that the water, both direct diversion and domestic pumpage effluent, may be used for the navigation of said waterway. There is absolutely nothing in the Act that relates to any right or authority given by Congress to withdraw water from Lake Michigan.

Despite the fact that the State of Illinois itself has filed several petitions in this Court to secure an order permitting an *increase* in diversion, it now takes the anomalous position (under the disguise of an amicus curiae brief filed by the Chicago Association of Commerce and Industry) that this Act ousted this Court of jurisdiction to consider any phase of these cases. If anything the explicit language

of this Act recognizes this Court's continuing jurisdiction by specific reference to the decree issued by the Court on April 21, 1930. All that this Act did was that upon the Sanitary Canal becoming a federal waterway, Congress *assented* to the discharging of the water into it which this Court provided for in its decree. So long as sufficient water is allowed to enter this federal waterway to sustain the navigation which it carries, neither the Federal Government nor the State of Illinois need complain. But on the other hand any amount of water introduced into this Canal beyond that which is needed to sustain its navigation is a *waste* of water from the Great Lakes Basin, where it is so sorely needed.

The Court has changed the amount of direct diversion after the enactment of the Rivers and Harbors Act of July 3, 1930 (46 Stat. 929). In the year 1940, in conformity with a stipulation signed by complainant lake states and defendants (this stipulation was agreed upon at the request of Special Master Monte M. Lemann) the Supreme Court authorized a temporary increase in diversion of 10,000 c.f.s. for a ten day period with the stipulation that this would not be used as a precedent in the future (311 U.S. 107).

In December, 1956 the Court, as an emergency measure, authorized a temporary increase in diversion from December 17, 1956 to January 31, 1957. (352 U.S. 945). In January, 1957 the Court extended the temporary increase in diversion through February 28, 1957 (352 U.S. 983).

If the Court has the power to authorize an increase in diversion, as it did in 1940, 1956 and 1957, the Court also has the right to stop or reduce the withdrawal of water from Lake Michigan, as was done in the Decree of April 21, 1930 (281 U.S. 179).

III (b)

Congress has no power to authorize the abstraction of waters of the Great Lakes to another watershed to the serious and continuing injury of the Great Lakes states and their peoples.

A. In General

The waters of the Great Lakes and their connecting waters, together with the submerged lands thereunder, are the property of the litoral states, and their title thereto, regardless of whether it be the full legal title or in trust for their people, is subject only to the paramount right of Congress to regulate commerce. Since the rights of these states in such waters and submerged lands are proprietary rights, the control of these states thereover must be final and conclusive except insofar as that title is qualified by the legitimate scope of the federal power to regulate navigation. *Illinois Central Railroad Company v. Illinois,* 146 U.S. 3387 (1892); *Shiveley v. Bowlby,* 152 U.S. 1 (1894); *Port of Seattle v. Oregon, etc.,* 255 U.S. 56 (1921).

The power of the United States over navigable streams is implied from its power to regulate interstate commerce. *Gibbons v. Ogden,* 9 Wheat 1 (1824). This implied power over navigable waters is limited to their preservation and improvement as avenues of interstate commerce. The right and duty of the United States in relation to navigable waters is a public trust for their preservation and improvement as interstate highways. The power thus granted to Congress by the Commerce Clause does not authorize it to regulate in order to create something else which it prefers to regulate or to attempt to improve the health of the people of a particular locality. *Wisconsin v. Illinois,* 278 U.S. 367 (1929).

When the United States was settled, the colonists brought to this country the common law of England. That common law prevailed in full force and effect at the time of the adoption of the constitution. The existence of that common law was taken for granted by the framers of the constitution, and the constitution was adopted and must be construed in relation to the rights, privileges and limitations which existed by virtue of the common law, and upon which common law rights the constitution, upon its adoption, was super-imposed. This has many times been recognized by the Supreme Court. In *Kansas v. Colorado,* 206 U.S. 46 (1907) at pp. 94-95 the court said:

> "It is undoubtedly true that the early settlers brought to this country the common law of England, and that the common law throws light on the meaning and scope of the Constitution of the United States, and is also in many States expressly recognized as of controlling force in the absence of express statute. As said by Mr. Justice Gray in *United States v. Wong Kim Ark,* 169 U.S. 649, 654:
>
> 'In this, as in other respects, it must be interpreted in the light of the common law, the principles and history of which were familiarly known to the farmers of the Constitution. *Minor v. Happersett,* 21 Wall. 162: *Ex parte Wilson,* 114 U.S. 417, 422; *Boyd v. United States,* 116 U.S. 616, 624, 625; *Smith v. Alabama,* 124 U.S. 465. The language of the Constitution, as has been well said, could not be understood without reference to the common law, I. Kent. Com. 336; Bradley, J., in *Moore v. United States,* 91 U.S. 270, 274.' "

When the constitution was adopted, and the express power given to Congress to regulate commerce, the right

to abstract the waters of a watershed had never been claimed and much less recognized. This fact is readily determined by any study of the common law in England as it existed at the time when the constitution was adopted, or since that time. Odgers, Common Law of England, Vol. 1, pp. 590-594. The power granted to Congress under the Commerce Clause was merely the power to appropriate all the waters of a navigable waterway for an avenue of commerce along such natural highway including the natural extensions thereof, together with the right to improve that natural highway in its natural basin without regard to any incidental injury therefrom; but there was never included within the grant of power the right to destroy the natural navigable waters for the purpose of attempting to improve the health, the sanitation facilities, the disposal of sewage, or the development of power of a particular community. The states which border on the Great Lakes were settled because of the existence of these resources, and the states themselves then enlarged and enhanced the gifts of nature within their boundaries. Citizens of these states settled and established themselves within their borders because the natural resources contained therein appealed to them.

The whole industrial and commercial structure of the United States has been built about the existence of two great waterways separated by the Continental Divide, opening interstate and international communication by the St. Lawrence on the one hand and the Mississippi on the other. Each has its natural advantages. In the basin of each of these waterways, vast populations have built up their social and industrial institutions to use to the maximum these natural advantages. An intense but constitutionally restrained rivalry exists between the two sections and the dominant character of their respective civilizations has been determined, throughout the past one hundred

years, as much by their respective advantages as by their common advantages. That the natural advantages of the Great Lakes region should now be sacrified to the alleged sanitation or power needs of Chicago or to the improvement in the navigable depths of the Mississippi or to an attempt to ameliorate a simulated or grossly exaggerated health problem, would be at variance with the just expectations of the Great Lakes States and their peoples, who have settled the Great Lakes region and built it into an efficient and magnificent industrial empire. To question these just expectations would be grossly inequitable, and as has been observed, there is no express language in the Constitution which gives rise to the implication of any such power.

The citizens of the Great Lakes States settled there because of the existence of certain natural advantages, such as climate, soil, and nearness to a large body of water. Surely neither these settlers nor the framers of the Constitution ever thought for one moment that any of these natural resources might at any time be taken away from those who settled in proximity to them and developed and made use of them, for the benefit of individuals who had chosen to locate in another watershed. The founding fathers never dreamed that one day a power given to Congress by the Constitution only by implication would permit a temporary majority in Congress to take away entirely or impair the natural resources in one state for the benefit of people residing in another. Congress has no more right to take the water which is the property of the complainant states, to their damage, and give it to Illinois or the Sanitary District of Chicago for sanitation or power purposes, than Congress would have to authorize Illinois to appropriate the forests or mineral resources of Wisconsin for the benefit of Illinois or a municipal agency of that state. The theory that Congress has no

power to authorize the abstraction of the waters of one watershed to another to the injury of the former does not conflict with nor challenge any of the decisions of the United States Supreme Court with reference to the power of Congress to improve navigable waters of the United States. The constitutional power of Congress over navigable waters extends only to improvement of the navigability of waterways and does not extend to their destruction or serious impairment, nor to the use of Congressional authority over navigable waters for the sanitation or power desires of Illinois or the Sanitary District. Any action by Congress under the Commerce Clause must bear some direct and reasonable relation to the ends of navigation. As the Court pointed out in *Wisconsin* v. *Illinois,* 278 U.S. 367 (1929), in speaking of the power of the Secretary of War:

> "The normal power of the Secretary of War under Section 10 of the Act of March 3, 1899, is to maintain the navigable capacity of Lake Michigan and not to restrict it or destroy it by diversion."

While Congress, as the Supreme Court has often said, may adopt any means having a direct relation to the control of navigation, not otherwise at variance with the Federal Constitution, *United States v. Chandler-Dunbar Co.,* 229 U.S. 53, 62 (1913), Congress may not arbitrarily destroy or impair the rights of riparian owners by legislation which has no real or substantial relation to the regulation of navigation. *Port of Seattle v. Oregon & Washington R.R.,* 255 U.S. 56, 63 (1921); *United States v. River Rouge Imp. Co.,* 269 U.S. 411 (1925). Thus, a diversion of water from Lake Michigan for power or sanitation purposes, even by authority of Congress, would be in violation of the rights of the Lakes States and their peoples. Congress itself would have no such power under the Com-

merce Clause to make a valid grant of authority to Illinois for any inadmissible purposes. In the same way, any action by Congress resulting in the destruction or serious impairment of the navigable capacity of the Great Lakes through diversion of water at Chicago to aid in the enrichment of an artificial channel in another watershed would be unconstitutional and void.

But, it may be asked, then under what authority did this Court permit a diversion of water in these cases into the Sanitary Canal and to maintain navigation in the Port of Chicago by its decree of April 21, 1930?

In answer to this hypothetical question we say that there is a vast difference between the power delegated to Congress under the Constitution to regulate commerce and the *power delegated to this Court to adjudicate cases or controversies.* When Congress passes laws it legislates, and in doing so it may not exceed the powers granted it. In fact, it cannot impair property rights without providing just compensation. Although this Court is subject to constitutional limitations it must be understood that in deciding cases it *adjudicates rights* as between the parties before it. It determines what their *rights are under the facts and the law applicable to those facts.*

In these cases, we repeat, this Court was faced with a *fait accompli,* — the Sanitary Canal had been constructed and used for many years before the Complainant States, or even the Federal Government, filed any proceedings to stop the diversion. Acting in equity this Court had to come to a decision which asserted and protected the just and legal rights of the Complainant States but which stated that the restoration of those rights had to be a gradual process. Considering the health problem facing Chicago and the enormous works that it would have to construct

in order to diminish its volume of water diverted from Lake Michigan, time was necessary and was accorded to the defendants to comply with the decree. But in *adjudicating rights* between litigants this Court merely determines what they are — it does not in a legal or constitutional sense take property from one litigant and by fiat and without due process of law award them to another. But when a legislative body acts it needs no pleadings to frame the issues, it need accord no person a hearing with right of cross-examination of witnesses and in fact it acts not *juridically at all but only politically.* This to us is the important distinction between the legislative and judicial process.

IV

Chicago is not entitled to offset its withdrawal of 1800 c.f.s. from Lake Michigan against the inflow into Lake Superior of 5,000 c.f.s. from Canada.

In defendants' brief, at page 22, the argument is made that the inflow of 5000 c.f.s. of water from the Hudson Bay area (Long Lac-Ogoki diversions) has more than offset the 1800 c.f.s. of domestic pumpage taken at Chicago from Lake Michigan. Defendants are not entitled to claim an offset for the following reasons:

1. The diversion of the waters from the Long Lac and Ogoki waterways located in the Hudson Bay area of Canada into Lake Superior is permitted pursuant to an exchange of notes between the United States and Canada in 1940, which agreement was ratified by the so-called Niagara Falls Treaty made by and between the United States and Canada, dated February 7, 1950 (ratified by the United States Senate on July 20, 1950). This Treaty divided the water at Niagara Falls equally, for power

purposes, between the United States and Canada but exempted the inflow from the Canadian Hudson Bay watershed from this division. Thus, Canada, under the notes of October 14 and 31, and November 7, 1940, and the Niagara Falls Treaty of February 7, 1950, is entitled to use all of the diverted waters from the Hudson Bay area for the generation of power at Niagara.

2. Lake Superior is now, and for more than 30 years has been regulated at the Soo. From the North Central Division Office, Corps of Engineers, we understand that the control works at the Soo are so operated as to maintain the levels of Lake Superior free of effects by the Canadian diversions of the Long Lac-Ogoki water into Lake Superior. Although the diversion into Lake Superior of about 5000 c.f.s. from Canada was brought about by agreement between the two countries, no such agreement ever has been reached between the United States and Canada with reference to the Chicago diversion. The regulation of the levels of Lake Superior by the International Joint Commission through its joint engineering board is for the purposes of maintaining stable levels and to reduce to a minimum the variations in levels, both seasonal and periodical. This means that during periods of low stages all of the Canadian diversion is maintained in Lake Superior, and thus confers no benefits to the lower lakes.

3. Because the 5000 c.f.s. inflow of Canadian water to Lake Superior is authorized by agreement between the United States and Canada the complainants have no control over this situation and certainly should not be penalized by allowing defendants to claim an offset for the 1800 c.f.s. they are diverting to the Mississippi River watershed.

4. Any improvement in navigable depths of the harbors

on the Great Lakes from the Hudson Bay area inflow was, and is (insofar as navigation is concerned), for the benefit of all the states, and not for the benefit of defendants alone. Upon admission to the union of the States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan and New York, each such state became a constituent member of the United States and was admitted into the union upon an equal footing with the original thirteen states in all respects. *Pollard v. Hagan,* 44 U.S. 212 (1845); *Munn v. Illinois,* 94 U.S. 113 (1877). Whenever the Federal Government makes a Treaty under the treaty making powers of the Constitution, Art. II, Sec. 2, it is for the benefit of all the states and their peoples, and not for the benefit of only one community or state. Where a treaty provision fairly admits of two constructions, one restricting and the other enlarging, rights which may be claimed under it, the more liberal interpretation is to be preferred. The treaty making power is independent of and superior to State Laws. *Makak Indian Tribe v. McCauley,* 39 Fed. Supp. 75 & 128 Fed. (2d) 867.

Yet the State of Illinois and the Metropolitan Sanitary District of Greater Chicago claim that they, and they alone, should reap the benefit of the additional water which our Federal Government secured by this agreement and treaty with Canada, as if they occupied a favored position among the States of the Union. And the irony of it all is that they want this largess of water not to *use* but to waste—so that the Sanitary District can further indulge in a continuation of its policy of deficient and inefficient treatment of its sewage by using greater quantities of diverted fresh water from Lake Michigan.

V

Substantial and continuing damages are inflicted upon the complainant states by reason of the artificial lowering of the levels of the Great Lakes, caused by defendants' abstraction from Lake Michigan of the domestic pumpage at Chicago. (Defendant's Brief, pp. 11-14).

Discussion of analysis of amended application transmitted by Honorable Wilber M. Brucker, Secretary of the Army to Honorable J. Lee Rankin, Solicitor General.

In the "Analysis of Amended Application by the States of Wisconsin, Minnesota, Ohio, Commonwealth of Pennsylvania, Michigan and New York to the United States Supreme Court for Reopening and Amendment of the Decree of April 21, 1930 re: Lake Michigan Diversions at Chicago", transmitted by Honorable Wilber M. Brucker, Secretary of the Army, to Honorable J. Lee Rankin, Solicitor General of the United States, and appended to this brief as Appendix A, the following conclusions are reached:

1. "Referring to page 12 of the amended application, 'The estimate of decrease in carrying capacity of lake vessels of 180 to 200 tons per cargo for a decrease in draft of 1.8 inches is considered to be of the proper magnitude." * * *

2. "It is considered appropriate to increase the estimate average annual loss in Senate Document 28 by 10 per cent, from 300,000 tons to 330,000 tons, and to also increase by 10 per cent the estimate of annual losses for a diversion of 1,800 cubic feet per second from 540,000 tons to 594,000 tons, say in round numbers 600,000 tons. * * * the annual average loss due to a permanent diversion of 1,000 c.f.s. is estimated to have a value of $660,000."

3. "In the second paragraph on page 12 of the amended application it is stated that the port development expenditures for the Great Lakes ports for the twelve-year period 1946-1957 were approximately $147 million. The expenditures made by the Corps of Engineers during the indicated period for construction and maintenance of harbor channels and port facilities throughout the Great Lakes area total about $87 million. Presumably the estimate in the amended application includes all expenditures by both federal and non-federal interests."

4. "On page 15 of the amended application a table is given showing loss of energy, capacity, and revenue to the New York Power Authority at its Niagara and St. Lawrence plants resulting from a permanent diversion of 1800 c.f.s. from Lake Michigan at Chicago. * * *"

"Detailed computations to verify the energy and capacity amounts as shown are not available for analysis. Based on comparative studies, the energy values as computed appear to be the additional amount of energy that could be generated if a permanent diversion at Chicago is returned to the lake-drainage system. Substantially all of the additional energy could be generated without additional investment in power generating facilities. The monetary value of the energy presented in the application is considered a reasonable estimate."

"Estimates of gain in capacity from the reverted waters could be determined only from a detailed analysis of many variable and complex factors. Marketing arrangements and load characteristics, now and in the future, would play an important part in

determining the actual saleable capacity for various flow conditions. Accordingly it is not possible for us to fully confirm the estimates of capacity values."

5. "In Section XIII, p. 16 of the amended application it is stated that a diversion of 1,500 c.f.s. is adequate to maintain navigation in the Port of Chicago and the Illinois Waterway. The flow of 1,500 c.f.s. is the authorized diversion exclusive of domestic pumpage. This rate of flow, *without domestic pumpage,* is adequate for operation of existing navigation facilities on the Illinois Waterway."

6. "A survey report was transmitted to Congress on September 3, 1958 in which the authorization of duplicate navigation locks on the Illinois Waterway is recommended. This report will be published as House Document 31, 86th Congress, 1st Session. Studies of water requirements for operation of the recommended duplicate locks show that an average annual flow of 1,826 c.f.s. would be required representing an increase of 326 c.f.s. over the amount of the presently authorized diversion."

Complainants agree with all of the above conclusions as above set forth in the analysis of their amended application except that complainants do not agree with the conclusions that (1) the "annual losses for a diversion of 1,000 c.f.s. * * * say in round figures 600,000 tons," and the conclusion that (2) such loss in tonnage" is estimated to have a value of $660,000".

Complainants contend that the damages and losses sustained by reason of the diversion of the Chicago domestic pumpage of 1,800 c.f.s. insofar as shipping on the Great Lakes is concerned amounts to an annual loss of

more than 2,500,000 tons of carrying capacity of Great Lakes vessels (American and Canadian) with an annual revenue of more than $4,000,000.

Insofar as the conclusion relating to the amount of water needed for future navigation on the Illinois Waterway when duplicate locks are constructed of 1,836 c.f.s., and if such duplicate locks are actually constructed and in use on the Illinois Waterway, it will be time enough then to decide that point.

We wish to reiterate that the pending suits are not for the collection of money damages, but are suits to enjoin the further diversion of domestic pumpage water from the Great Lakes water system to the Mississippi valley watershed. All that is necessary is that the complainants show substantial damages caused by the action of the defendants. Complainants submit that the allegations in the amended application do show that substantial damages have been and are being inflicted upon complainants by the artificial lowering of the levels of the Great Lakes produced by the action of defendants in diverting 1,800 c.f.s. of the waters of the Great Lakes.

VI

In 1930 the Court was faced with a fait accompli. The District was discharging large quantities of raw sewage in the canal and until adequate treatment works were built, the Court had no choice but to allow the diversion to continue. Today, with drastically changed conditions, compelling reasons require the return of the domestic pumpage to Lake Michigan. (Referring to Defendants' Brief, p. 21 et seq.)

(a) In General

When the Court entered the Decree of April 21, 1930, it was faced with a *fait accompli.* The sewage of the Chicago Sanitary District (mostly untreated) was being discharged into the Chicago Drainage Canal and flushed away with water diverted from Lake Michigan. So, for humanitarian reasons and to protect the health of the people of the Chicago area, and until the District built adequate sewage treatment works, the Court had no choice but to allow the diversion of domestic pumpage to continue for the time being.

Today, conditions have changed drastically. The population of the Chicago area is increasing rapidly. More domestic pumpage will be taken from Lake Michigan. It is estimated, in a study made by a firm of engineers and reported to the Commissioner of the Department of Water and Sewers, City of Chicago, that the water which will be required in 1980 by the City of Chicago and the suburbs now served and which will be served by Chicago, will total 2300 c.f.s., as compared to the 1760 c.f.s. domestic pumpage now withdrawn by the Chicago Water Department.

Today, the Chicago Sanitary District has completed the West-Southwest Side sewage treatment works and with the addition of needed facilities in the next few years near the Stickney treatment works this new plant will dispose of sludge and solids removed from sewage by the so-called Zimmerman process. Today, about 200 to 250 tons per day of solids cannot be handled with present facilities and such solids are taken to lagoon beds located along the Chicago Drainage Canal. (Engineering News-Record, November 27, 1958). When the needed supplemental facilities are provided, and with proper operation of the sewage treatment works, the domestic pumpage can be returned to Lake Michigan with no danger whatsoever to the health of the people in the Chicago area.

(b). The Chicago domestic pumpage will increase substantially in the future.

Chicago has been able to expand in population from 1930 to date, without increasing substantially the amount of diversion of domestic pumpage from Lake Michigan at Chicago only because Chicago has materially increased its efficiency in the withdrawal, distribution, and use of its domestic pumpage. This has been accomplished by stopping the huge, wasteful leaks in its water system which have cost the City of Chicago many millions of dollars. This great and unreasonable waste of water of the Chicago Water Works system has been overcome to a great extent by repairing old or installing new pipes and facilities so that today the large leakage in the city's water system has been materially reduced.

Since Chicago has repaired or replaced the leaky mains and faulty facilities which allowed huge quantities of Lake Michigan water to be lost and thus wasted, it is certain that the Chicago water system *has reached the limit of its*

efficiency in this respect and the future will show a big increase in water use due to increase in population. This is proven by the fact that the City of Chicago now has under construction near Navy Pier a tremendous water filtration plant to satisfy the anticipated large, future demands for water. This new north side water filtration plant will be capable of supplying sufficient water for the anticipated needs of the people of the Chicago area for the next 25 years or more. (Chicago Tribune, July 14, 1958, Section F, Part 2, p. 1; Chicago Sun Times, August 27, 1958).

According to the 1957 annual report of the Department of Public Works and Sewers, City of Chicago, the per capita consumption of the inhabitants of the city of Chicago is 240 gallons per day; for the people of the suburbs who receive Chicago water the per capita consumption is 147 gallons per day. The socalled Meissner Report (PURE WATER, Vol. VIII, No. 10, October, 1956) shows that in 1980 the total withdrawal of domestic pumpage at Chicago for Chicago and the suburbs receiving Chicago water will total 2300 c.f.s. in contrast to the 1800 c.f.s. now withdrawn from Lake Michigan.

In the "Report upon adequate water supply for the Chicago Metropolitan area 1955 to 1980" made by Alvord, Burdick and Howson, Consulting Engineers, at Part IV-14, it is said:

> "In effect the forecast assumes a normal rate of increase in the total pumpage for use by Chicago after about a 20-year period of decrease attributable to leakage elimination."

Thus, it would seem to follow that if the use of water will be materially increased in the next 17 years and

every seventeen years to come, as has been forecast by the Illinois State Water Survey, and if the demand for water in the United States will be doubled in the next 17 years as forecast by Major-General Emerson C. Itschner, Chief, Corps of Engineers, United States Army (see complainants' Brief in support of amended application, page 2), certainly, with a normal rate of increase in the total pumpage for use by Chicago and the suburbs served by Chicago the amount of domestic pumpage will increase substantially from the approximately 1800 c.f.s. of domestic pumpage now being diverted from Lake Michigan. With the elimination of the leakage in Chicago's water system, the amount of domestic pumpage at Chicago will begin to climb again, after years of decrease in pumpage due to leakages which cost Chicago millions of dollars, and which leakages should have been stopped years ago.

In view of this inevitable upward trend in the diversion of water for domestic pumpage the water resources of the Great Lakes Basin are going to be subjected to a constant decrease in navigational depths and the power plants of the New York Power Authority will lose huge quantities of water for power generation. The complainant States are justifiably fearful that unless something is done now before this increase in domestic pumpage becomes a reality it may be difficult, if not impossible, for this Court twenty years from now to turn back the clock. Although the Courts have been loathe to apply the doctrine of laches to sovereign states in litigation involving a private citizen, yet the complainant states believe that their cause stands on a better footing by presenting their complaint of anticipated injury *now* before the situation becomes a *"fait accompli."*

VII

Discussion of cases cited by defendants and the De Minimis Doctrine in general.

Connecticut v. Massachusetts, 282 U.S. 660, 673, relating to priority of uses of diverted water is not in point on the facts. *Wyoming v. Colorado,* 298 U.S. 573, 579-581; *Nebraska v. Wyoming,* 325 U.S. 589, 627; all involved states having the rule of priority of appropriation or where the rule was dominant in the areas affected. In *Colorado v. Kansas,* 320 U.S. 383, the special facts governed the decision. *Connecticut v. Massachusetts,* 282 U.S. 660, 669, and *Washington v. Oregon,* 297 U.S. 517, 522, on the point that damage must be shown by the use complained of are also distinguishable on the facts.

Defendants continually attempt to belittle the complainants' claims of damages and losses sustained by reason of the artificial lowering of the levels of the Great Lakes due to the diversion of 1,800 cubic feet per second of water from Lake Michigan. It should be pointed out that the pending suits are not for the collection of money damages but are suits to enjoin the further diversion of domestic pumpage water from the Great Lakes water system to another watershed. The complainants must show only substantial damages. Complainants submit that the allegations in the amended application do show that substantial damages have been and are being inflicted upon complainants by the artificial lowering of the levels of the Great Lakes produced by the action of defendants in diverting 1,800 c.f.s. of the waters of the Great Lakes.

In Complainants' Amended Application Section X, at pages 11-12, it is alleged that the diversion at Chicago of 1,800 c.f.s. of domestic pumpage has lowered the levels

of the Great Lakes and that this decreases the carrying capacity of the large lake vessels by from 180 to 200 tons per cargo and this takes away annually more than 2,500,000 tons of carrying capacity of Great Lakes vessels, causing a loss of more than $4,000,000 in annual revenue.

The Amended Application alleges further, at pages 13-16, that the artificial lowering of the Great Lakes system by the diversion of more than 1,800 c.f.s. of water from the Great Lakes-St. Lawrence as "domestic pumpage" at Chicago shows a total annual revenue loss of $1,027,-841.15 to the Power Authority of the State of New York. It is also alleged that if equal loss of Canada's Niagara and St. Lawrence plants is considered, the diversion of 1,800 c.f.s. at Chicago results in an annual revenue loss to the New York Power Authority and Canada of $2,-055,682.30. In fifty years this would amount to $102,785,000.

Complainants have re-examined the Amended Application with particular reference to the allegations as to the damages caused by the diversion of approximately 1800 cubic feet per second of domestic pumpage at Chicago. Complainants believe that they can prove the losses as set forth in the Amended Application and in the above paragraphs of this brief.

Certainly, substantial continuing losses as shown above are being inflicted upon complainants by the action of defendants in diverting 1,800 c.f.s. of the waters of Lake Michigan and thereby artificially lowering the levels of the Great Lakes system.

In *Reeves et al v. Jackson,* 207 Ark 1089, 184 SW 2nd 256, 258, it was held that the "de minimis" doctrine does not apply to the invasion of the property of another, citing 26 RCL 762 and annotation of "de minimis" in 44 ALR 168.

In the Delaware River case, the Court did not apply the doctrine of equitable apportionment.

The brief filed by the Attorney General of Illinois leans heavily on the Delaware River case, *New Jersey v. New York,* 283 U.S. 336 (1931) in which Pennsylvania intervened, see 280 U.S. 528 (1930). In this case the State of New York was permitted to build huge reservoirs at the head-waters of the Delaware River within its own borders, and to divert a certain portion of the dammed-up waters to the City of New York for domestic purposes. But a close study not only of the opinion but of the Master's report indicates the following:

(a) New York had to construct at its own expense not only dams but also sewage disposal works to protect this portion of the river against contamination.

(b) It was permitted to divert only the excess flood-waters which were of no use either to Pennsylvania or New Jersey, but to the contrary were harmful during flood periods.

(c) New York was required to release from the various reservoirs sufficient water at all times of the year in order to provide in the Delaware River a minimum volume of flow, even though during the summer months it could receive no water for itself. This provided the river with a flow during the summer greater than that normally prevalent when the water was naturally low.

(d) This arrangement was of great benefit to New Jersey and Pennsylvania and caused no damage whatsoever to the interests of these two states. The doctrine of equitable opportionment was mentioned in the opinions but it should be borne in mind that the diversion was allowed under the severe restrictions mentioned above.

In the instant proceedings, the State of Illinois is conferring no benefits whatsoever on the other States and is inflicting irreparable injury to their interests. The whole State of Illinois, in a state of nature, contributed only 503 c.f.s. of water to the Great Lakes basin, and the State of Illinois is now diverting about 3300 c.f.s. of water from that basin at Chicago. 1,800 c.f.s. as domestic pumpage.

It should be pointed out that the Delaware River case, supra, was not decided on the basis of equitable apportionment but on the basis of equitable principles, namely, the lack of injury to the lower riparian states and the conferring of a benefit upon them.

In *Colorado v. Kansas,* 320 U.S. 383 (1943) at 393-394, the Court in discussing the equitable apportionment of water, said:

> "* * * in determining whether one State is using, or threatening to use, more than its equitable share of the benefits of a stream, all the factors which create equities in favor of one State or the other must be weighed as of the date when the controversy is mooted."

In *Nebraska v. Wyoming,* 325 U.S. 589 (1945), at page 618, the Court referred to the above quoted remarks (in *Colorado v. Kansas,* 320 U.S. 383, 393-394 and said:

> "That case did not involve a controversy between two appropriation states. But if an allocation between appropriation states is to be just and equitable, strict adherence to the priority rule may not be possible. For example, the economy of a region may have been established on the basis of junior appropriations. So far as possible those established

> uses should be protected though strict application of the priority rule might jeopardize them. Apportionment calls for the exercise of an informed judgment on a consideration of many factors. Priority of appropriation is the guiding principle. But physical and climatic conditions, the consumptive use of water in the several sections of the river, the character and rate of return flows, the extent of established uses, the availability of storage water, the practical effect of wasteful uses on down-stream areas, the damage to upstream areas as compared to the benefits to downstream areas if a limitation is imposed on the former — these are all relevant factors. They are merely an illustrative, not an exhaustive catalogue. They indicate the nature of the problem of apportionment and the delicate adjustment of interests which must be made."

A reading of the foregoing cases shows that the doctrine of equitable apportionment is applied to states having the rule of prior appropriation and not to states (such as Illinois and the other Great Lakes States) adhering to the common law rule of reasonable use based upon riparian ownership. The Delaware River case, we submit, is clearly distinguishable from the instant case.

The gist of this Court's decision in the instant case was that by diverting water to the Mississippi watershed the defendants were doing a "wrong and they must stop". "Equitable apportionment" was never mentioned in the pleadings, during the hearings, in the Master's Reports, nor in the various opinions of this Court. This is the first time the words "equitable apportionment" have been heard in these cases. The thing that mystifies counsel for the complainant States is by what process of legal legerdemain do the defendants expect this Court to convert

the "wrong" which they were and have been committing against the just rights of the complainants into a "right". For as we understand the doctrine of equitable apportionment it is nothing more than an equitable division of water among riparian states or individuals *who have the right to make use of the waters for the purposes intended by them.*

In these cases this Court held that the diversion of water by the defendants for sanitation purposes was "inadmissible"—was a "wrong" and therefore unlawful; and that the permit of the Secretary of War was illegal. It is difficult for us to see how this Court can be called upon to divide or apportion property rights which have been wrongfully used by the defendants, or how it can extend and augment that "wrong" by allowing a greater diversion. If anything, this Court should cut down the "wrong" as the complainants propose in their amended petition.

VIII

The failure of the sanitary district to stop certain bad practices by Chicago industries has resulted in placing a heavy pollutional load on the sanitary canal and the Calumet River.

The Commonwealth Company, which produces electric power in the Chicago area, has seven generating stations located on the Chicago Sanitary Canal and expects to construct two additional ones in the near future. The Company's use of canal water for cooling and condensing purposes would, it is estimated, utilize during the summer months, half the oxygen resources of water directly diverted from Lake Michigan and treated effluents of the

Sanitary District. The following table of oxygen solubility shows how the heating up of the water by use for cooling purposes reduces the dissolved oxygen in water:

°Centrigrade	*°Fahrenheit*	*Dissolved Oxygen (ppm)*
0	32	14.5
5	41	12.8
10	50	11.4
15	59	10.4
20	68	9.2
25	77	8.6
30	86	7.6

It is manifest that the use of the waters of the Chicago Sanitary Canal for cooling purposes in such large quantities by these seven plants imposes a heavy burden on the waters contained in the Canal. The return of high temperature water to the Canal reduces considerably the ability of the waters of the Canal to oxidize the sewage or the effluent emanating either from the sewers or from the sewage treatment plants. Obviously, these plants could not have located on these sites and tapped into the waters of the Canal without the permission of the Sanitary District. From the standpoint of efficiency of plant operations, the locations along the Canal are in very unfavorable positions. The steam power generating plants in Michigan and Wisconsin, for example, are located or are locating along the shores of the Great Lakes where there is an abundance of clean, fresh, oxygen laden water for cooling purposes and where no harm can be done to the receiving waters by the discharge of water of a higher temperature.

The above is just another instance where the Sanitary District has allowed an operation to develop and grow which is exactly contrary to good practice in the use of the Canal waters; for, instead of decreasing the pollutional

load on the Canal the District has permitted everything possible to be done to increase the pollution of the Canal.

Another example of the District's failure to stop a bad practice came to light in the suit brought by the United States to enjoin the Republic Steel Corporation, International Harvester Company and the Interlake Iron Corporation from discharging solids into the Calumet River, a navigable watercourse located in Chicago, and to secure a mandatory injunction directing the three defendants to restore to a depth of 21 feet below low water datum for Lake Michigan the federal channel of the Calumet between certain locations. The United States District Court ruled that the Government was entitled to the relief asked for. On appeal to the United States Circuit Court of Appeals for the Seventh Circuit, the decree appealed from was reversed, on the ground that there is no legal basis, statutory or otherwise, upon which the Government is entitled to "injunctive relief". This decision was based on technical grounds.

The three defendants, in their manufacture of iron and steel ingots, pump water in vast amounts from the Calumet River. This water, after use, is returned to the river through sewers maintained by the defendants. Each of the defendants operates a tank-type settling basin designed to recover fine flue dust contained in the water after use. However, some of the dust escapes and is washed into the river. There is also some water which flows directly into the river through sewers, which has not passed through the settling basins. This dust settles into the federal channel of the Calumet River and reduces the navigable depths of said river.

Here again, the Sanitary District is allowing the waters of the Sanitary Canal (since the waters of the Calumet

River reach the Canal eventually) to be used in such a way as to increase the burden on its waters.

Likewise, the waters of the North Branch of the Chicago River, and other waters of the District, are being polluted by industries and individuals without fear of action by the District.

We submit that all these added burdens placed on the Sanitary Canal and the other watercourses in the District were not contemplated by the Court when it heard the suits filed by complainants in the 1920's and when the Court's decree of April 21, 1930 was entered.

In addition to the bad practices indulged in by industries located within the Sanitary District, the unorthodox and permanent practices of the District itself, such as the lagooning of sludge in sludge beds located along the canal, have placed an additional and unnecessary load on the waters of the Canal. This practice began in 1941, at the suggestion of the Special Master, Honorable Monte M. Lemann, as a temporary measure to relieve the pollutional load on the Canal, until the District could construct and operate additional facilities needed to dispose of the solids from the Southwest Side Treatment Plant. This practice has continued from 1941 to date, though the District now says it is making plans for the elimination of the sludge beds.

The one significant and disturbing thing is that all of the above bad practices which place a heavy pollutional load on the waters of the rivers and the Canal (located within the District) are not corrected nor are remedial steps taken until these practices are brought to public light. Then, there is a ceremonial of contrition put on by the officials of the District with a nebulous promise made to remedy them some time in the far distant future.

IX

CONCLUSION

Complainants respectfully submit that the relief prayed for in their Amended Application to the Court should be granted for the following reasons:

1. Drastically changed conditions since the entry of the Decree of April 21, 1930 provide compelling reasons for the return of Chicago's domestic pumpage to Lake Michigan.

2. Substantial and continuing damages due to the diversion of the domestic pumpage at Chicago are inflicted upon the Great Lakes States and their peoples. This damage relates to navigation and commercial interests of all the Great Lakes States, and also the damage inflicted upon the State of New York by reason of interference with the use of the waters of the Niagara and St. Lawrence rivers for power development.

3. The Injunctive Relief sought by Complainants does not conflict with the Rivers and Harbors Act of July 3, 1930 (c. 847, 46 Stats. 929).

4. The operating efficiency of the Chicago Sanitary District's sewage disposal plants is not in full compliance with the Court's orders in these suits. The efficiency of operation of these plants could be improved through means other than diversion of water from the Great Lakes.

5. The return of the domestic pumpage at Chicago to Lake Michigan could be accomplished without creating any hazard to the health of the people residing in the Chicago area.

6. That if it should be determined by this Court upon recommendations of the Special Master, upon full hearing, that measures other than the return to Lake Michigan of the Chicago domestic pumpage effluent can be put into effect so that such measures will reduce either the direct diversion, or limit or restrict the domestic pumpage so that the total amount of diversion of water from the Great Lakes at Chicago could be reduced or restricted, the Court should consider the entry of a supplemental decree, or a modified decree to that effect; and that the Court grant such other relief agreeable to and in accordance with equity and good conscience which will insure to the greatest possible degree the future integrity and development of the Great Lakes reservoir so that the maximum use and benefit of its waters be assured to the complainant States.

Respectfully submitted,

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John R. Davison
POWER AUTHORITY OF NEW YORK
New York, New York

Motion to Amend and Enlarge Prayer

MOTION TO AMEND AND ENLARGE COMPLAINANTS' PRAYER FOR RELIEF IN COMPLAINANTS' AMENDED APPLICATION

Now come the States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan and New York and move this Honorable Court to amend and enlarge Complainants' Prayer for Relief in Complainants' Amended Application, as follows:

(3) (a) That if it should be determined by the Court through a Special Master, upon the investigation recommended by the Solicitor General, and upon full hearings, that measures other than the return to Lake Michigan of the Chicago domestic pumpage effluent can be put into effect so that such measures will reduce either the direct diversion or limit or restrict the Chicago domestic pumpage, to the end that the total amount of diversion of water from the Great Lakes at Chicago will be reduced or restricted, the Court should enter a supplemental decree, or a modified decree, to that effect.

(b) That the Court grant such other relief agreeable to and in accordance with equity and good conscience which will insure to the greatest possible degree the future integrity and development of the Great Lakes reservoir

so that the maximum use and benefit of its waters be assured to the complainant States.

Respectfully submitted,

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New York, New York

Appendix

DEPARTMENT OF THE ARMY

Washington, D.C.

Honorable J. Lee Rankin
Solicitor General of the United States
Department of Justice
Washington, D.C.

Dear Mr. Rankin:

In your letter of 14 January to Major General Emerson C. Itschner, Chief of Engineers, you request his views as to the facts stated in the documents filed with the Supreme Court concerning Lake Michigan diversions at Chicago. The amended application now pending in the Supreme Court would require the State of Illinois and the Metropolitan Sanitary District of Greater Chicago to return the effluent from "domestic pumpage" to Lake Michigan.

Attached is an analysis prepared by Major General Itschner of the amended application.

Sincerely yours,

/s/ WILBER M. BRUCKER
Secretary of the Army

1 Incl.
Analysis (in dup)

12 February 1959

Analysis of Amended Application by the States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan and New York to the U. S. Supreme Court for Reopening and Amendment of the Decree of April 21, 1930 re Lake Michigan Diversions at Chicago.

The following analysis of the Amended Application to the U. S. Supreme Court has been prepared in response to request from the Solicitor General, Department of Justice, as contained in his letter of 14 January. The amended application is in further support of the original application in which it was requested that the State of Illinois and the Metropolitan Sanitary District of Greater Chicago be required to return the effluent from "domestic pumpage" to Lake Michigan. The original application was denied by Court order entered on 3 March 1958.

It is stated in the first paragraph on page 12 of the amended application:

> "It decreases the carrying capacity of the large lake vessels by from 180 to 200 tons per cargo. It takes away annually more than 2,500,000 tons of carrying capacity of the Great Lakes vessels at a loss of more than $4,000,000 in annual revenues."

The estimate of decrease in carrying capacity of large lake vessels of 180 to 200 tons per cargo for a decrease in draft of 1.8 inches is considered to be of the proper magnitude.

The estimate of annual tonnage loss of 2,500,000 tons with a value of $4,000,000 appears to be based on an assumption of full utilization of the United States and Canadian Great Lakes fleet with lake levels so low that all vessels would be affected. We do not have sufficient information on the composition of the Canadian fleet to estimate the reduction in its capacity. In paragraph 172 of Senate Document 28, 85th Congress, the Corps of Engineers estimated that the reduction in capacity for the United States Great Lakes fleet under similar assumptions for a permanent increase in diversion of 1,000 cubic feet per second

would be 1,000,000 tons. The reduction of capacity for a diversion of 1,800 cubic feet per second would be 1,800,000 tons on the same basis. However, as a practical matter, the assumed conditions on which the above estimates are based could never occur since some of the smaller, lighter draft vessels in the fleet would not be restricted in their loading because of limited channel depths even during periods of low lake stages.

The average annual loss to the United States Great Lakes fleet as determined in Senate Document 28 for a permanent increase in diversion of 1,000 cubic feet per second, was 300,000 tons (page 47). The results of that study are still considered to be valid based on data available at that time, but are subject to some adjustment due to more up-to-date information.

It is considered that the most reasonable estimate of average annual losses to the United States Great Lakes fleet, resulting from a lowering of lake levels due to an increase in diversions, should be based on the criteria used in the study in Senate Document 28. These criteria are as follows:

a. The anticipated United States Great Lakes Commerce and fleet as of 1985.

b. The present general pattern of traffic on the Great Lakes.

c. Waterway improvements to the connecting channels and harbors which can be expected to be accomplished.

d. The natural variation in levels of the Great Lakes.

The current analysis has been based on the fluctuation

of lake levels as occurred for the 35-year period 1922-1956 in accordance with the criteria listed above. With use of data comparable to that available for the Senate Document 28 studies, it is estimated that with a permanent increase in diversion of 1,800 cubic feet per second the average annual loss would be 540,000 tons. Recent studies of future traffic in iron ore and stone indicate that estimates used in Senate Document 28 should be revised upward about 10 percent. More recent estimates are not available for prospective traffic in other commodities. It is considered appropriate to increase the estimated average annual loss in Senate Document 28 by 10 percent, from 300,000 tons to 330,000 tons, and to also increase by 10 percent the estimate of annual losses for a diversion of 1,800 cubic feet per second from 540,000 tons to 594,000 tons, say in round numbers 600,000 tons.

The value of $0.80 per ton as used in Senate Document 28 has been reviewed in the light of more recent information on cost of transportation as developed in connection with the Great Lakes Harbor studies. In these studies, the actual cost per ton varied from $0.34 per ton for short haul coal trips to $1.80 per ton for grain from Duluth to Buffalo. The estimated composite or weighted average cost is considered to be $1.10 per ton. Accordingly, the average annual loss due to a permanent diversion of 1,800 cubic feet per second is estimated to have a value of $660,000.

In the second paragraph on page 12 of the amended application it is stated that the port development expenditures for the Great Lakes ports for the 12-year period 1946-1957 were approximately $147 million. The expenditures made by the Corps of Engineers during the indicated period for construction and maintenance of harbor channels and port facilities throughout the Great Lakes area total about

$87 million. Presumably the estimate in the amended application includes all expenditures by both Federal and non-Federal interests.

On page 15 of the amended application a table is given showing loss of energy, capacity, and revenue to the New York State Power Authority at its Niagara and St. Lawrence plants resulting from permanent diversion of 1,800 cubic feet per second from Lake Michigan at Chicago. The estimates are based on an equal loss of flow to Canada and the U.S. from the diversion, that is, a loss of 900 cubic feet per second at the Power Authority's plants. The estimates also appear to be obtained by the same procedure as that shown by the Power Authority as given on page 255 of the printed hearings held on 28-29 July 1958 by the Senate Public Works Committee on HR 2 and S 1123, 85th Congress.

Detailed computations to verify the energy and capacity amounts as shown are not available for analysis. Based on comparative studies, the energy values as computed appear to be the additional amount of energy that could be generated if the permanent diversion at Chicago is returned to the lake-drainage system. Substantially all of the additional energy could be generated without additional investment in power generating facilities. The monetary value of the energy presented in the amended application is considered a reasonable estimate.

Estimates of gain in capacity from the reverted waters could be determined only from a detailed analysis of many variable and complex factors. Marketing arrangements and load characteristics, now and in the future, would play an important part in determining the actual saleable capacity for various flow conditions. Accordingly, it is

not possible for us to fully confirm the estimates of the capacity values.

A representative of the staff of the Federal Power Commission has been consulted in connection with the power items. He concurs in general, with the views expressed in the preceeding paragraphs.

In Section XIII, page 16, of the amended application it is stated that a diversion of 1,500 cubic feet per second is adequate to maintain navigation in the Port of Chicago and the Illinois Waterway. The flow of 1,500 cubic feet per second is the authorized diversion exclusive of domestic pumpage. This rate of flow, without domestic pumpage, is adequate for operation of existing navigation facilities on the Illinois Waterway.

A survey report was transmitted to Congress on 3 September 1958 in which the authorization of duplicate navigation locks on the Illinois Waterway is recommended. This report will be published as House Document No. 31, 86th Congress, 1st Session. Studies of water requirements for operation of the recommended duplicate locks show that an average annual flow of 1,826 cubic feet per second would be required, representing an increase of 326 cubic feet per second over the amount of the presently authorized diversion.