IN THE

Supreme Court of the United States

OCTOBER TERM, 1958.

STATES OF WISCONSIN, MINNESOTA, OHIO AND PENNSYLVANIA,

Complainants,

vs.

STATE OF ILLINOIS AND THE SANITARY DISTRICT OF CHICAGO,

Defendants.

No. 2 Original.

STATE OF MICHIGAN,

Complainant,

vs.

STATE OF ILLINOIS AND THE SANITARY DISTRICT OF CHICAGO,

Defendants.

No. 3 Original.

STATE OF NEW YORK,

Complainant,

vs.

STATE OF ILLINOIS AND THE SANITARY DISTRICT OF CHICAGO,

Defendants.

No. 4 Original.

BRIEF IN OPPOSITION TO THE AMENDED APPLICATION OF THE COMPLAINANTS FOR A REOPENING AND AMENDMENT OF THE DECREE OF APRIL 21, 1930, AND FOR FURTHER RELIEF.

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

In their amended application (pp. 17-18), the States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan, and New York pray for a reopening and amendment of the decree of April 21, 1930 so as to require by mandatory injunction the return to Lake Michigan of all the water taken therefrom as domestic pumpage. Alternatively, they seek the appointment of a Special Master to take evidence on the issues and also the appointment of a Permanent Master invested with authority to maintain surveillance over the operating facilities of the Sanitary District.

The defendants submit that on the basis of facts set forth in the amended application and other indisputable facts, the amended application should be denied.

QUESTIONS PRESENTED.

This Court's 1930 decree authorized defendants to divert from Lake Michigan on and after December 31, 1938 an annual average of 1500 cubic feet of water per second (c.f.s.) in addition to domestic pumpage, that is, water used for domestic and industrial purposes. Complainants now ask, as they did both in 1930 and in the original application last Term, that defendants be required to return to the Lake, in the form of sewage effluent, all the water withdrawn for domestic pumpage.

The original application and the separate motion filed by the State of New York were denied on March 3, 1958, "with leave to renew the application and motion with allegations made more definite and certain as a basis for the relief sought." *Wisconsin* v. *Illinois,* 355 U. S. 944 (1958).

The specific question presented is whether the complainants have added any material allegations, not included in the original motion and application.

In a broader sense, the question is whether it appears from the amended application that changed and unforeseen circumstances have arisen since 1930 of so serious a nature as to justify the drastic relief requested, tantamount to a reversal of a major contested portion of the 1930 decree.

A further question, discussed at greater length in the brief of the Chicago Association of Commerce and Industry, as *amicus curiae,* is whether the enactment by Congress of the Rivers and Harbors Act of July 3, 1930, shortly after the entry of the decree, precludes the granting of the relief now sought by the complainants.

No question is properly presented as to whether the Sanitary District has been efficiently disposing of Chicago sewage, although substantial portions of complainants' amended application (pp. 5-8) and brief (pp. 1-3, 6-9, 11-15, 28-29, 31-32), and five of the six subjects complainants wish a Special Master to explore (Br. pp. 31-32), seem to be concerned with that subject. Whether or not the Sanitary District has been inefficient (and we shall show that it has not been) is not germane to whether the provision in the decree permitting the diversion of domestic pumpage should be deleted.

Nor is the judicial process properly invoked to forestall contemplated congressional action with respect to the amount of diversion of water through the Illinois Waterway. Yet complainants assert in their brief (p. 3) that they "join in the filing of this amended application," fearful that "insistent * * * demands for more diverted water from the Great Lakes might cause or bring about, unless opposed by the complainant states, a situation from which complainants and defendants alike could not be rescued even by this court * * *." The repeated allegations as to the inefficiency of the District operations also suggest that the real purpose of this proceeding is to

attempt to circumvent anticipated action by Congress affecting the amount of diversion from Lake Michigan. Defendants, however, are not asking this Court to increase the amount of water they can take from Lake Michigan.*

STATEMENT OF ALLEGATIONS AND FACTS.

In 1922, 1925 and 1926 the complainant States filed their complaints seeking to enjoin the diversion of water from Lake Michigan through the Chicago River and Sanitary and Ship Canal to the Illinois River. In 1926 the suits were consolidated and referred to the Honorable Charles Evans Hughes as Special Master (273 U. S. 642; Master's 1927 Report, pp. 5-7).**

Complainants argued before the Master and in this Court that not only should the direct diversion from Lake Michigan by the Sanitary District be barred, but that the amount of water withdrawn from the Lake for domestic purposes by Chicago and other Illinois municipalities should be required to be returned in the form of sewage effluent to the Lake after its use. The Special Master (1929 Report, pp. 120-22) and the Court (281 U. S., at pp. 199-200) rejected the contention that water used for domestic purposes should be returned to Lake Michigan.

* Defendants have requested Congress to authorize them, temporarily and experimentally, to divert an additional 1,000 c.f.s. for a short period as a basis for a study of the effect of increased diversion upon the Illinois Waterway (the series of rivers and canals extending from the Chicago River to the Mississippi River). Twice Congress has passed such bills, but the President has vetoed them. H. R. 3300, 83rd Cong. (1954); H. R. 3210, 84th Cong. (1956). At the last Congress the legislation passed the House, but did not come to a vote in the Senate. H. R. 2, 85th Cong. A similar Bill, H. R. 1, was introduced on January 7, 1959 in the 86th Congress. A large part of complainants' brief is devoted irrelevantly to an attempt to prove that such additional diversion is not necessary.

** The Report of the Special Master, filed November 23, 1927, will be referred to as "Master's 1927 Report," and his Report on Re-Reference, filed December 17, 1929, will be referred to as "Master's 1929 Report".

The Court authorized the defendants to divert an annual average of 1500 c.f.s. on and after December 31, 1938, in addition to domestic pumpage.

As a result of this Court's decree, defendants spent $316 million in the construction of sewage treatment plants, intercepting sewers, and pumping stations.* $109 million had previously been spent to construct sewers which discharged the sewage into the Sanitary Canal instead of Lake Michigan. (Master's 1927 Report, pp. 20-21; 278 U. S. at p. 404.) If the domestic pumpage were to be put back into Lake Michigan in the form of sewage effluent, the defendants' sewage disposal facilities would have to be rearranged, and new pumping stations, works and tunnels, extending miles out into Lake Michigan, would have to be constructed at tremendous cost, estimated by competent engineers to total from 250 to 300 million dollars and to entail annual operating costs of more than 2 million, and debt service charges of more than 15 million dollars annually for a period of thirty years.

Plaintiffs now assert that the amount diverted for domestic pumpage is excessive. In 1930 the amount of domestic pumpage was 1700 c.f.s. The amended application (p. 10) itself alleges that this amount had increased only to 1805 in 1956 and 1803 in 1957.** The actual amount of domestic pumpage from 1930 through 1958, as shown by the official records of the U. S. Army District Engineers at Chicago, computed pursuant to the provisions of this Court's decree, is shown in the following table:

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* Hearing, Subcommittee of Senate Committee on Public Works, H. R. 3210, S. 1772, S. 2250, 84th Cong., 2d Sess., pp. 18-19.

** Complainants' amended application (p. 8) gives the total diversion only for the years 1939, 1954 and 1956 as 3110, 3205 and 3500 c.f.s., respectively. As shown by the Table, 1939 was an unusually low year, and in 1956 the amount of direct diversion was temporarily increased pursuant to order of this Court because of low water in the Mississippi River, which impaired navigation. *Wisconsin* v. *Illinois,* 352 U. S. 954 (1956). The three years selected by complainants do not provide a proper basis for comparison.

ANNUAL AVERAGE METROPOLITAN PUMPAGE AND DIVERSION FROM LAKE MICHIGAN

BY

THE METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO

1930 TO 1958 INCLUSIVE.

	Domestic Pumpage c.f.s.	Direct Diversion c.f.s.	Total Diversion & Pumpage from Lake Michigan c.f.s.
1930	1700	6660	8360
1931	1680	6500	8180
1932	1650	6450	8100
1933	1690	6270	7960
1934	1692	6433	8125
1935	1602	6484	8086
1936	1712	4862	6574
1937	1665	4989	6654
1938	1604	4999	6603
1939	1577	1499	3076
1940	1589	1681*	3270*
1941	1610	1496	3106
1942	1575	1528**	3103**
1943	1605	1500	3105
1944	1606	1531**	3137**
1945	1587	1498	3085
1946	1600	1495	3095
1947	1616	1500	3116
1948	1640	1500	3140
1949	1641	1493	3134
1950	1607	1499	3106
1951	1616	1490	3106
1952	1633	1497	3130
1953	1692	1499	3191
1954	1708	1497	3205
1955	1739	1500	3239
1956	1805	1699*	3504*
1957	1784	2387*	4171*
1958	1760	1498	3258

* Increase over 1500 c.f.s. authorized by order of U. S. Supreme Court.

** Increase over 1500 c.f.s. authorized by order of War Department.

Both the original and amended applications, in Paragraph V, allege that as the population and industrial growth of the Sanitary District increases, the amount of domestic pumpage will increase beyond the limits estimated in 1930. The Special Master's Report filed in 1929 (p. 104) showed that the average domestic pumpage for 1925 was 1338 c.f.s., for 1926, 1395 c.f.s., for 1927, 1421 c.f.s., and for 1928 1565 c.f.s.. The average annual increase for the period from 1925 through 1928 was 75 c.f.s.. When the decree was entered it thus would have been estimated that the pumpage in 1930 would be 1715 c.f.s.. It actually was 1700 c.f.s.. At this rate of progression, it would have been estimated in 1930 that the domestic pumpage would have doubled by 1958. However, the rate of increase was much less than this; in 1958 domestic pumpage was only 1760 c.f.s. as compared with 1700 c.f.s. in 1930.

In 1945 Canada completed power projects north of Lake Superior which resulted in the diversion from the Albany River Basin into the Great Lakes of 5000 c.f.s. which would otherwise flow into Hudson Bay. This diversion "increases the water supply to all the Great Lakes" and has the effect of raising "the levels" of Lake Michigan and Lake Huron "by about 0.37 foot" or 4.4 inches; Lake Erie by 0.23 foot; and Lake Ontario 0.24 foot (Army Engineers 1957 Report, Pars. 10, 55, pp. 3, 16; Par. 59, p. 17; Par. 63, p. 18).*

An averment in the amended application (Par. VII, p. 9) not contained in the original application is that the use of water at Chicago for domestic purposes will double within

* Sen. Doc. No. 28, 85th Cong., 1st Sess. 1957, entitled "Effects of an Additional Diversion of Water from Lake Michigan at Chicago; Letter from the Assistant Chief of Engineers for Civil Works, Department of the Army, transmitting a Report." This report will be referred to as the "Army Engineers Report."

the next 17 years,* resulting in an additional lowering of lake levels by 1975 of another two inches. Apparently complainants assume (see Par. VI) that the amount now used for domestic pumpage lowers the lake levels two inches, and that a doubling of the population will double the domestic pumpage and thus lower the lake levels another two inches.

Complainants in their brief in support of the amended application (pp. 10, 11) state that in 1930 the Sanitary District comprised an area of 438 square miles, "with a human population of 3,710,000 plus an industrial waste equivalent population of 1,700,000", or a total of 5,410,000; that in 1955 "the Sanitary District had a total area of 920.14 square miles and a human population of 4,600,000, with an industrial waste equivalent of 3,800,000", or a total of 8,400,000. Thus, the increase in population and industrial waste equivalent population in the 25-year period was 2,990,000.

In their brief last Term (p. 25) the complainants stated that according to the Special Master's Report filed in 1929,

* The statement on p. 11 of complainants' brief, that the Sanitary District has estimated that "the demand for water will double within 17 years," is inaccurate. The publication of the Sanitary District there cited refers to an estimated growth in population but not to the effect of population growth on the amount of domestic pumpage. Complainants' 17-year figure seems to have been based upon newspaper articles purporting to state the estimates of General Itchner of the Army Engineers and of the Illinois State Water Survey (Br., p. 2). The brief on its face shows that General Itchner's statement related to the demand for water in the United States as a whole. And the Illinois State Water Survey estimate was concerned with the use of ground water by inland communities and did not relate to the Chicago area and Lake Michigan. It is true that the Sanitary District Report estimated that the population of the Chicago area would increase to 15 or 20 million "in our lifetime." But the experience in the past 28 years demonstrates clearly that the amount of water consumed does not necessarily increase proportionately with the increase in population.

"in 1960 the then Sanitary District would be serving a population of 5,860,000 and an industrial waste equivalent population of 2,300,000", making a total of 8,160,000. It thus appears that the difference between the 1930 estimate of the population in 1960 and the actual population in 1955 was only 2.9 per cent.

As the Table on page 6, *supra,* demonstrates, this increase in population has not substantially increased the amount of domestic pumpage.

Many of the same facts upon which complainants now rely for a drastic change in the decree were contained in the record culminating in the 1930 decree, or were foreseen at that time.

As shown above, the record before the Master in 1929 included a remarkably accurate forecast of the growth of the Chicago area.

That the withdrawal of water for domestic pumpage would affect lake levels was obviously foreseen when the decree was entered. This Court's opinion recited (278 U. S. at pp. 407-8) that:

> "A diversion of an additional 1500 cubic feet per second * * * would cause an additional lowering in Lakes Michigan and Huron of about one inch * * *."

The Army Engineers Report estimates (p. 26) that an additional diversion of 1000 c.f.s. would lower the levels of Lakes Michigan and Huron one inch and Lakes Erie and Ontario five-eighths of an inch. Neither figure—1500 c.f.s., as stated in the Court's opinion, nor 1000 c.f.s., as determined by the Army Engineers—supports complainants' allegation that the present amount of water taken for domestic pumpage lowers the lake levels two inches.

The passage on page 12 of the amended application with

respect to the existence of 400 harbors on the Great Lakes and their connecting channels, of which 100 have been improved by the Federal Government, with the inner harbors being excavated and being maintained at local expense, is taken almost in *haec verba* from 278 U. S. at page 408.

Complainants aver that a lowering of two inches in lake levels would decrease "the carrying capacity of the large lake vessels by from 180 to 200 tons per cargo" (Amended App., p. 12). The Master in his 1927 Report noted (p. 115) that "with the loss of every inch of draft below 20 feet, the modern lake bulk freighter suffers a loss of from 90 to 100 tons in cargo capacity." The Report of the Army Engineers similarly states that "The tons of cargo per inch of immersion of the bulk carriers vary from 38 in the older, small vessels to over 100 in the modern, large vessels" (Army Engineers Report, Par. 171, p. 44). The Court in 1930 was thus aware of the possibility that the carrying capacity of lake vessels might be affected by the authorized diversion precisely as alleged by complainants.

Subparagraph (1) of Paragraph X of the amended application (pp. 12-14) alleges that the lower lake levels which have resulted from the diversion of domestic pumpage have nullified and continue to nullify the costly improvements made by Federal and local governments to lake channels and harbors, diminished the value and utility of expensive terminal facilities, and by decreasing the carrying capacity of large lake vessels, will deprive lake shippers annually of more than two and one-half million tons of carrying capacity, at a loss of $4,000,000 a year. The Army Engineers Report states that by 1985 "a permanent increase and diversion of 1000 cubic feet per second from Lake Michigan would reduce the annual average carrying capacity of the United States Great Lakes bulk-

cargo fleet by about 300,000 tons," with a "resulting annual economic loss * * * estimated at $240,000" (Par. 180, p. 47). The report pointed out (Par. 182, p. 47) that even these small losses could be averted by relatively inexpensive compensating works in the St. Clair and Niagara Rivers.

The amended application realleges (Par. X, pp. 14-15) the great cost of constructing power facilities on the Niagara and the St. Lawrence, in total amounting to over a billion dollars, and alleges that (presumably when these facilities are completed) the annual revenue loss to the New York State Power Authority from the withdrawal of 1800 c.f.s. of water used for domestic pumpage at Chicago will be $1,027,841, about 80% of which will occur at the Niagara project. It is alleged that the Canadian projects will suffer a similar loss.

The Report of the Army Engineers shows that the total flow of water available for power at Niagara is 125,000 to 149,000 c.f.s. (Par. 100, p. 29; Table 11, p. 60) and at the St. Lawrence Barnhart Power Plant is 215,000 c.f.s. to 257,000 c.f.s. (Table 16, p. 65). At Niagara, 50,000 to 100,000 c.f.s. has been reserved for Niagara Falls for scenic purposes, 7000 c.f.s. has been diverted through the Welland Canal, and 1000 c.f.s. has been diverted for the New York State Barge Canal (same Report, Par. 99, p. 29; Par. 59, p. 17; Par. 57, p. 16; Table 11, p. 60).

The Report finds (Par. 144, p. 38) that the effect of a permanent increase of 1000 c.f.s. in diversion from Lake Michigan would cause a loss of dependable capacity of less than one-half of 1 per cent, and (Par. 141, p. 37; Par. 203, p. 52) a power energy loss estimated to be about 0.4% of the total potential energy production of all United States and Canadian plants.

The Report also finds (p. VII, Letter of Submittal; Par. 144, p. 38) that the "capacity loss (resulting from an

additional 1000 c.f.s. diversion) is not believed of sufficient magnitude to warrant replacement"; that "assignment of value to the changes is not warranted from a practical operational standpoint."

The monetary value of the loss of "energy in the United States and Ontario plants" caused by an additional 1000 c.f.s. diversion "is computed" in the Report (Par. 146, p. 38) "to be about $708,000 annually," evaluated "in terms of the cost of alternative generation in modern, efficient, thermal plants."

The amended application (p. 15) alleges that the loss to the New York Power Authority in annual capacity from a permanent diversion of 1800 c.f.s. would be 29,700 kilowatts on the Niagara and 6521.4 kilowatts on the St. Lawrence, valued at $12 per kilowatt. The Army Engineers Report (Table 10, p. 59) shows that the total United States capacity on the Niagara will be 2,380,000 kilowatts, and on the St. Lawrence 912,000 kilowatts.*

The Power Authority of the State of New York, in an Official Statement on January 5, 1959 relating to the sale of $200 million of its Series E General Revenue Bonds for the Niagara Falls project, recites (p. 3) that the total annual energy production of its Niagara Plant will be 13 billion kilowatt-hours a year in 1963, and the total annual energy production of its St. Lawrence Plant (p. 8) in 1964 will be 6½ billion kilowatt-hours a year. The amended application (p. 15) alleges that the annual energy loss of the Power Authority from a permanent diversion of 1800 c.f.s. at Chicago will be 222,166,800 kilowatt-hours a year. On the basis of these figures, the annual energy loss will

* Although complainants measure capacity in kilowatt-years and the Army Engineers in kilowatts, a comparison of their figures indicates that the terms have the same meaning. Hearings, Subcommittee of Senate Committee on Public Works, H. R. 2, S. 1123, 85th Cong. 2d Sess. on Diversion of Water from Lake Michigan, p. 255, Table II (1958).

be approximately 1.1% of the total production of the two plants.

The Official Statement of the Authority (p. 14) contains an estimate of $82,663,000 annual gross revenue from the combined Niagara and St. Lawrence projects. In their amended application (p. 15) complainants make a theoretical computation of total annual revenue loss to the New York Power Authority based on capacity and energy loss. The total annual loss is stated to be $1,027,841.15.

The Power Authority estimates the load factor at its Niagara plant to be 70 per cent, and at its St. Lawrence plant to be 85 per cent.*

The amended application alleges that the lowering of lake levels due to defendants' domestic pumpage has substantially damaged riparian properties, summer resorts and cottages (p. 14). Just how the alleged lowering of lake levels will produce this harmful effect is not explained. That such a result is not inevitable appears from the Army Engineers 1957 Report, which states (Par. 208, p. 53; Pars. 148-154, pp. 39-40): "A reduction in lake levels of up to one inch resulting from a permanent increase of 1000 cubic feet per second in diversion from Lake Michigan would be beneficial to shore property, particularly during high lake stages." It may be noted that in 1956 a representative of the lake front property owners in Michigan, Wisconsin, Illinois and Indiana appeared at the hearings before the House Subcommittee on Rivers and Harbors in support of additional diversion from the Great Lakes because of the loss to the property owners resulting from *high* lake levels.**

* Hearings, *supra*, p. 255, Table I.

** See Hearings Before the Subcommittee on Rivers and Harbors of the House Committee on Public Works on H. R. 2, 85th Cong., First Sess. (1957), *Lake Michigan Water Diversion*, pp. 64, 147-149.

In 1954 the property owners on Lake Ontario opposed the St. Lawrence Power project on the ground that by raising the level of Lake Ontario it would injure their properties. *Lake Ontario Land Development Association* v. *Federal Power Commission,* 212 F. 2d 227 (C. A. D. C. 1954), certiorari denied, 347 U. S. 1015 (1954).

Both the original and amended applications, in Paragraph III, allege, the latter somewhat more succinctly, that the present sewage system does not treat all sewage in time of storm, when sewage is mixed with storm water, that the Sanitary District is not fully and effectively treating all sewage, but is permitting some to be discharged untreated into the drainage canal, that this condition will become aggravated as the population and industry in the area increase, and that the Sanitary District in 1929 assured this Court that its facilities would be operated in an efficient manner so as not to endanger public health. It is to be noted that the Master in his 1929 Report (p. 24) stated that complainants acquiesced in the system of sewers referred to by the complainants in their amended application (III) and original application (III) as the "combined type," which conveyed not only sewage and industrial wastes, but during times of storm such amounts of run-off as are permitted to find their way into the system. The combined type of sewer system is used in all major lake cities.

The amended application (but not the original) alleges that the efficiency of the Sanitary District's disposal plants has dropped sharply in the last six years, and sets forth (at p. 7) a table for the years 1952-57 showing that the reduction in biochemical oxygen demand (b.o.d. removal) was 93.6% in 1952 and that it gradually declined to 85.6% in

1957. The average for the first nine months of 1958 was 90.7 per cent.*

The amended application fails to state that this Court's opinion (281 U. S. at p. 200) recognized that the percentage of purification would vary from 85 to 90 or more. The Special Master's 1929 Report (p. 26) summarizes the supporting testimony of an expert witness on the degree of purification attainable as follows:

> "The degree of purification to be accomplished will necessarily vary according to conditions. Under certain conditions it will be very high, fully 90%, possibly as high as 95% at times. Under other conditions the degree of purification will not be as high, and will drop to 85 or 80 or possibly lower.
>
> "The conditions which affect the degree of purification are the temperature, the storm flows, the industrial wastes which are discharged into the sewers, and other conditions which affect chiefly the biological action upon which the processes employed for the most part depend. Taking all of the plants into consideration, a general average of 85% of purification is a reasonable assumption."

The Sanitary District has advised us that the temporary decline in operating efficiency between 1953 and 1957 indicated in complainants' tabulation was partially attributable

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* Complainants' table is based upon the Annual Reports of Operation of the Sanitary District. The same source of information shows that for the first nine months of 1958 the percentages were:

January	94.8	June	92.0
February	92.6	July	84.8
March	90.8	August	89.9
April	92.2	September	92.0
May	90.4		

The reduction in the percentage of biochemical oxygen demand is the customary test for purification.

The amended application also refers to the percentage of solids removed and states that this dropped from an average of 91.1% in 1952 to 80.6% in 1957. The same source of information shows that the percentage for the first nine months of 1958 averaged 87.4%.

to the fact that during those years it was necessary to install in successive stages an entirely new air filtering system and a completely new air distribution piping system. During the progress of this work the usual operating efficiency could not be fully maintained. In 1958 normal operations were resumed and the percentage of purification immediately rose to 90.7. It should also be noted that in 1958 there was less rainfall than in recent years, which is a factor tending to increase the efficiency of the operation.

Complainants in their amended application (p. 13) repeat an allegation contained in the original application (IX) that recent studies made by the United States Corps of Engineers have established that a diversion of 1500 c.f.s. is adequate to maintain navigation in the Port of Chicago and the Illinois Waterway.

Defendants in their 1957 brief (pp. 24-26) challenged this allegation on the ground that it appeared to be based on a misunderstanding of a report made in January 1957 by the Division Engineer, Brigadier General P. D. Berrigan, North Central Division Corps of Engineers, United States Army.* The Solicitor General, in a memorandum filed in this cause (p. 4) last Term on behalf of the United States, indicated that he was informed by the Chief of Engineers that such a determination had not been made, but that the matter required further study. The amended application does not allege any specific facts to support the allegation. Defendants have not been apprised of such a study.

The records of the United States Army District Engineers at St. Louis show that the depth of water in the Illinois Waterway at Alton, Illinois, is again at such a low point as to impair navigation.

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* Army Engineers Report, Par. 183, p. 47, *et seq.*

ARGUMENT.

I.

No Showing Has Been Made That Domestic Pumpage Is Excessive, or Will Become Excessive, or That Unforeseen Changes in Conditions Have Occurred Requiring Modification of the Decree.

In December 1957, 27 years after the entry of this Court's 1930 decree, the complainants filed their original application and motion to have the domestic pumpage provision eliminated so as to require defendants to pour back into Lake Michigan all of the Chicago area sewage effluent. This Court denied the application and motion, with leave to renew with allegations made more definite and certain as a basis for the relief sought.

It is defendants' position that the complainants have not cured the insufficiency of the motion and original application filed last Term. No facts have been presented showing that the 1930 decree should be so drastically modified as to deprive defendants of the right to withdraw over half of the water which that decree authorized them to take from Lake Michigan.

It is incumbent upon complainants to show that such a radical alteration in the decree is required by changed and unforeseen conditions. A decree should not be reversed "under the guise of readjusting. * * * Nothing less than a clear showing of grievous wrong evoked by new and unforeseen conditions should lead [the Court] to change what was decreed after years of litigation * * *" *United States* v. *Swift & Co.*, 286 U. S. 106, 119 (1932).

The foundation of complainants' case is that the Chicago

area has grown tremendously since 1930 and will continue to do so in the future, and that this has caused and will cause a great increase in the amount of domestic pumpage. As has been pointed out (p. 9, *supra*), the growth of Chicago was foreseen quite accurately at the time of the original proceeding. Despite the great increase in population and industry, the amount of domestic pumpage for 1958 was only 60 c.f.s. more than in 1930. Thus, there is obviously no basis for complainants' claim that the present domestic pumpage is excessive, or that the growth of Chicago up to now justifies the relief sought. Indeed, the slight increase in domestic pumpage has been more than counterbalanced by the 5000 c.f.s. which Canada has brought to the Lakes from the Hudson Bay watershed, so that complainants are much better off than could have been anticipated when this Court's decree was entered.

In so far as the future is concerned, complainants can be no more definite now than they were in their original application filed and found insufficient last Term. Of course the Chicago area will continue to grow, although how rapidly is anyone's guess. But in view of the small impact upon the amount of pumpage of the large increase in population during the past 28 years, the possible or probable effect of future growth upon the amount of pumpage needed provides far too speculative and nebulous a predicate for the revision of the decree sought by complainants. *Arizona* v. *California,* 283 U. S. 423, 462-464 (1931). The Court "will not exert its extraordinary power to control the conduct of one State at the suit of another, unless the threatened invasion of rights is of serious magnitude and established by clear and convincing evidence." *Connecticut* v. *Massachusetts,* 282 U. S. 660, 669, 674 (1931). What happened in the past shows that whether or not such growth in the future will affect lake levels in a manner substantially injurious to complainants is completely conjectural.

II.

The Effect of Domestic Pumpage Withdrawal on Lake Levels Was Anticipated in 1930, and Navigation, Commercial, and Power Interests Have Adjusted Themselves to the Amount of Withdrawal Then Authorized by the Court.

The only specific allegations as to injury not contained in the application found insufficient last Term are those relating to the effect on the carrying capacity of lake vessels and the generating capacity of New York power facilities (see pp. 10-13, *supra*).

When the decree was entered in 1930 it was known that the diversion authorized—1500 c.f.s. plus domestic pumpage—would reduce lake levels by several inches. It was known that each inch that lake levels were lowered would reduce the capacity of large lake freighters by about 100 tons. It was, of course, known that there were 400 harbors and connecting channels, and that Federal, state and local governments were spending large sums of money to maintain and deepen them. It was also known that domestic pumpage in 1930 would average around 1700 c.f.s. and that this amount would increase. As has been pointed out, it would have been anticipated in 1930 that the increase would be much greater than it actually was. Senator Blaine of Wisconsin, in supporting the 1930 law in which Congress authorized the diversion permitted by this Court (see pp. 27, *infra*), assumed that "the accretion to the pumpage [would be] 100 cubic feet seconds per year" (72 Cong. Rec. 11,005).

Thus, when the 1930 decree was entered, the effects on shipping, commerce, and harbor facilities of permitting diversion of 1500 c.f.s., plus domestic pumpage in the range of 1700 c.f.s., were known. In the face of such effects, which were obviously taken into account by this Court,

the diversion of domestic pumpage was authorized by the decree. Complainants should not now be permitted to relitigate the matters then decided.

Ever since the entry of the 1930 decree, anyone who constructed large lake vessels or planned and developed harbor facilities or power projects must have based his expenditures and designs on the assumption that the lake levels would be affected by and subject to the authorized diversion at Chicago. Certainly, the carefully engineered power projects on the Niagara and St. Lawrence, on which over a billion dollars will be spent, must have been tailored to the water levels authorized by this Court's decree. Those who planned and financed transactions of that magnitude would not have been so imprudent as to base their calculations on the assumption that this Court would recede from its 1930 decree and add an inch or two to the lake levels by compelling a return of sewage effluent to Lake Michigan after its use for domestic purposes in the Chicago area. Indeed, they were not. The Official Statement of the Power Authority of the State of New York (p. 30) directs attention to the diversion at Chicago and to the withdrawal of water from Lake Michigan for "sanitary and domestic use" under this Court's decree. The Power Authority's annual estimated revenues of about $82,663,000* could not have included the $1,027,841.15 additional revenue which complainants now allege will be lost because of the withdrawal of an assumed 1800 c.f.s. for domestic pumpage at Chicago.

In short, the answer to complainants is that their rights have been and are subject to the withdrawal authorized by this Court's decree, and all persons affected by the authorized withdrawal for domestic pumpage must have adjusted themselves to it many years ago. The diversion authorized

* Official Statement, Power Authority of State of New York, Jan. 5, 1959, p. 14.

had precisely the effects which were foreseen, and which shipping, port, and power interests must have taken into account. Such effects do not justify the drastic revision of the decree now sought by complainants.

III.

The Equitable Considerations Which Caused This Court in 1930 to Reject Complainants' Demand for the Return of Domestic Pumpage to Lake Michigan Are More Compelling Today.

Complainants seem to assume that they are entitled to relief if they show that the diversion of domestic pumpage causes them some injury. If that had been this Court's theory, all diversion would have been prohibited in the first place. But when this Court rejected complainants' first attempt to halt the diversion of domestic pumpage in 1930, it said (281 U. S. at p. 200):

> "* * * We think that upon the principles stated in *Missouri* v. *Illinois,* 200 U. S. 496, 520, *et seq.*, the claims of the complainants should not be pressed to a logical extreme without regard to relative suffering and the time during which the complainants have let the defendants go on without complaint."

On the basis of equitable considerations alone, the defendants submit that the amount of alleged injury to complainants does not justify a modification of the decree subjecting defendants to the great burden, at a tremendous cost, of reorientating the sewage facilities so as to pipe the sewage effluent into Lake Michigan.

The amended application alleges that the diversion of domestic pumpage "takes away more that 2,500,000 million tons of carrying capacity * * * at a loss of more than $4,000,000 in annual revenue" (p. 12). This calculation is presumably based upon the alleged two-inch

lowering of lake levels resulting from a withdrawal of 1800 c.f.s., and disregards the fact that the inflow of 5000 c.f.s. from the Hudson Bay area into Lake Superior has more than offset this withdrawal. The Army Engineers Report concludes that the effect of a one-inch reduction would be a loss by 1985 of an annual carrying capacity of 300,000 tons and an economic loss of $240,000 for United States vessels (p. 47). The Canadian fleet is about 22% of the American. At this rate, the total loss of capacity for two inches would be 600,000 tons for United States carriers and 132,000 for Canadian. But even accepting complainants' figures, 2½ million tons is only a little over 1% of the total United States 1955 tonnage of 239,263,000 tons (*id.* at p. 42). And even this loss could easily be avoided (p. 11, *supra*).

The alleged loss of $1,027,000.00 to the New York Power Authority is only a minute proportion of the total anticipated annual revenue of $82,663,000. The Army Engineers' Report advises that a diversion of 1,000 c.f.s. would cause a loss in capacity of less than one-half of one per cent (par. 144, p. 38), and an energy loss of four-tenths of one per cent (par. 141, p. 37) in all of the United States and Canadian plants. For 1,800 c.f.s. the reduction in energy produced would be about .72 of 1%. Even if the complainants' figures as to loss of revenue be accepted, the percentage would be only about 1.2%. Until New York's Niagara project is finished sometime in the 1960's (Army Engineers Report, par. 103, p. 29) there will be no loss there. Furthermore, the Power Authority itself anticipates a load factor of 70% at its Niagara Plant and 85% on the St. Lawrence. (See p. 13, *supra.*) When the plants will not be operated at full capacity, it is difficult to see how a slight diminution in the flow of water in the rivers would have any measurable effect on the amount of energy produced and the resulting revenue.

Complainants make no estimate as to the amount of injury which they allege the lowering of lake levels by two inches will cause to riparian property owners. The Engineers 1957 Report suggests that such persons on the whole benefit from some lowering of lake levels (see p. 13, *supra*). The action of groups of riparian owners in supporting increased diversion at Chicago and in opposing higher lake levels on Lake Ontario (see p. 14, *supra*) supports this opinion.

These relatively inconsequential injuries, whether or not *de minimis* looked at by themselves, are not sufficient to justify termination of the withdrawal for domestic pumpage. Moreover, to look at these effects alone would be to see only one-half of the picture. If the domestic pumpage were to be put back into Lake Michigan, the defendants' sanitary facilities designed to flow in the opposite direction would have to be rearranged, and new pumping stations, works, and tunnels constructed at appalling cost. The hundreds of millions already spent by defendants would not have been utilized in the way they were, in compliance with the program submitted to the Court and required by the 1930 decree, if the defendants had been required to put the effluent back into the Lake.

In 1930 this Court considered the "relative suffering" and the time during which the complainants "let the defendants go on without complaint," and held that the Master's recommendation to permit the permanent withdrawal of the domestic pumpage from Lake Michigan was "more reasonable than the opposite demand" (281 U. S. at p. 200). The events since that time, including reliance on the decree for 28 years, make it even more inequitable to require the return of the pumpage to the Lake than it was then.

IV.

No Rule of Law Requires That Water Used for Domestic Pumpage Be Returned to Its Source.

Complainants seem to premise their argument on the theory that it is unlawful *per se* for defendants to diminish the water available for navigation and power purposes by diverting it to another watershed. New York successfully argued precisely the contrary in support of its diversion of Delaware River water to the Hudson River watershed in order to enlarge New York City's water supply in *New Jersey* v. *New York,* 283 U. S. 336 (1931). This Court there said (343):

> "In a most competent and excellent report the Master adopted the principle of equitable division which clearly results from the decisions of the last quarter of a century. Where that principle is established there is not much left to discuss. *The removal of water to a different watershed obviously must be allowed at times unless states are to be deprived of the most beneficial use on formal grounds.* In fact it has been allowed repeatedly and has been practiced by the States concerned. *Missouri* v. *Illinois,* 200 U. S. 496, 526. *Wyoming* v. *Colorado,* 259 U. S. 419, 466. *Connecticut* v. *Massachusetts,* 282 U. S. 660, 671." (Emphasis added.)

"Drinking and other domestic purposes are the highest uses of water." *Connecticut* v. *Massachusetts,* 282 U. S. 660, 673 (1931). The primacy of such use also has been recognized in both the Canadian Boundary Water Treaty of 1909 (36 Stat. 2448) and in the 1950 Treaty of Niagara between the United States and Canada (TIAS 2130). In his 1927 Report the Special Master, in commenting on the 1909 Treaty, said (55):

> "* * * With reference to the use of boundary waters,

> it was provided that the following order of precedence should be observed among the various uses enumerated in the treaty for these waters, to-wit: (1) uses for domestic and sanitary purposes; (2) uses for navigation, including the service of canals for the purposes of navigation; (3) uses for power and for irrigation purposes. These provisions were not to 'apply to or disturb any existing uses of boundary waters on either side of the boundary'."

Article III of the 1950 Treaty provided that the amount of water available "shall be the total outflow from Lake Erie to the Welland Canal and the Niagara River (including the Black Rock Canal) less the amount of water used for domestic and sanitary purposes, and for the service of canals for the purposes of navigation."

There is no rule of law whereby water taken for domestic purposes must be returned to the same watershed in the form of sewage. As the Special Master stated in his 1929 Report (p. 122):

> "If the City of Chicago is entitled to take its water supply from Lake Michigan for the ordinary and reasonable uses of its inhabitants, it cannot be said that the State or the City is subject to any established rule of law which requires it to turn into the Lake what is no longer water but sewage or the effluent of sewage treatment plants. If there were a way of destroying the sewage or sewage effluent altogether, or evaporating it, it does not appear that the State or the City would violate any right of the complainants in doing so (*Fisk* v. *Hartford,* 69 Conn. 375)."

V.

Complainants' Charges of Operating Inefficiency by the Sanitary District, Though Irrelevant, Are Unfounded.

We do not wish to leave unanswered the large part of complainants' argument as to the alleged inefficiency of the Sanitary District's operations—even though there would seem to be no rational connection between the efficiency of its operation and complainants' demand that the treated sewage be dumped back into Lake Michigan.

Exactly as was anticipated in 1929, the percentage of b.o.d. removal has fluctuated between 85% and 95%, depending upon the temperature, the storm flow and other factors (see p. 15, *supra*). This does not prove that the plants has been inefficiently operated. As has been pointed out, the low percentages (still over 85%) between 1954 and 1957 were partially attributable to interruptions in complete treatment during the installation of new equipment. The unsupported charge in complainants' brief (p. 15) that the "Sanitary District still persists in using obsolete techniques of sewage disposal" should be contrasted with the naming of the sewage disposal system in 1955 as one of the seven engineering wonders of America.* The technique used by the Sanitary District, known as the activated sludge process, has become the leading process used in sewage disposal.* The 1957 Report of the Army Engineers (Par. 185, p. 48) states that the District has provided complete treatment for all of its sewage, and that the sewage is treated in "modern efficient plants." Indeed, in last Term's application (pp. 29-30) complainants credited the District with doing "a reasonably efficient job at these works."

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* 50 Civil Engineering No. 593, Nov. 1955.

The charge (Compl. Br. p. 12) that "the Sanitary District is dragging its feet insofar as the current operation of its sewage treatment works are concerned" is wholly without factual substance. It is based entirely on the percentages for the years 1953-1957, already explained. The average rate of reduction in b.o.d. for the removal year 1958 was 90.7%.

VI.

The Injunctive Relief Requested Is in Conflict With the Action of Congress in Authorizing the Discharge of Domestic Pumpage Into the Sanitary Canal for the Illinois Waterway.

The authority to divert the domestic pumpage no longer is derived from this Court's decree. In the Rivers and Harbors Act of July 3, 1930 (46 Stat. 929) Congress expressly authorized for navigation of the Illinois Waterway the diversion permitted by this Court for the Chicago River. The pertinent portion of the Act is as follows:

> "Provided further, that the water authorized at Lockport, Illinois, by the decree of the Supreme Court of the United States, rendered April 21, 1930, * * * 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;"

Although this statute does not authorize the diversion of more water than did the decree, it did adopt for the waterway the amount fixed in the decree (289 U. S. 395, 403-4).

This Court has recognized that Congress has the power to determine the amount of water to be withdrawn, if it chooses to do so. 278 U. S. 367, 417; 281 U. S. 179, 198, 200; *Sanitary District* v. *United States,* 266 U. S. 405, 426 (1925). Congress exercised that power in the 1930 statute,

The statutory provision was appurtenant to an appropriation for the completion of the Illinois Waterway for navigation between Lake Michigan and the Mississippi River. This Court had only considered the navigational needs of the Chicago River as a part of the Port of Chicago, not those of the Waterway (278 U. S. 367, at 418; Master's 1929 Report, pp. 122, 126).*

The 1930 Act instructed the Secretary of War to cause a study to be made of the amount of flow needed for the Waterway and to report to "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."

In concurring in a report made in 1933 by Colonel Dan I. Sultan, General E. M. Markham, Chief of Engineers, stated that "the report conclusively shows that aside from sanitary requirements, the minimum average annual flow from Lake Michigan required to meet the needs of a commercially useful waterway in the Illinois River is a direct diversion of 1500 cubic feet per second *in addition to domestic pumpage* * * *. This flow will not substantially injure the existing navigation on the Great Lakes." (Italics supplied.) (H. R. Doc. No. 184, 73rd Cong., 2nd Sess., p. 6 (1933).) General Markham also concurred in a recommendation of Colonel Sultan that after the completion of the sewage treatment works, navigation

* Complainants are in error in stating in Paragraph V of their amended application that the diversion authorized by the decree was "for the purpose of maintaining navigation in the Port of Chicago and the connecting Illinois waterway * * *." The same error was made by complainants in Paragraph V of their original application. This Court has not determined or considered in any of the cases before it the amount of water required for navigation in the Illinois Waterway.

conditions along the waterway should be observed in order to determine whether additional diversion would be necessary. (*Id.* at 58.) No subsequent determination has been made by the Army Engineers.

The only subsequent indication of Congressional intention is the recent passage by both Houses of bills vetoed by the President, to authorize defendants to withdraw temporarily an additional 1000 c.f.s. (see note, p. 4, *supra*). The Congressional action taken suggests that there is no legislative disposition to *reduce* the withdrawal previously authorized.

The Illinois Waterway is, of course, a navigable waterway of the United States, subject to the dominion and control of Congress. Since the amount of diversion, including domestic pumpage, required for the waterway, is dependent on factors not considered in this Court's determination of the amount required for the Chicago River, Congress clearly intended, defendants submit, that its authorization be treated as a legislative act subject to change only by Congress itself.*

CONCLUSION.

In 1930 this Court authorized the withdrawal of the water needed for domestic pumpage and the discharge of the sewage effluent into the Sanitary Canal. All of the facts and arguments upon which complainants now rely in support of their attempt to delete this provision were fully foreseen at that time, except for the 1945 addition of 5000 c.f.s. through Lake Superior and the development of the new St. Lawrence and Niagara projects, which will be affected only to a minimal extent, and which were undoubtedly planned so as to accommodate themselves to the diversion authorized by this Court.

* This point is treated in greater detail in the brief for the Chicago Association of Commerce and Industry, as *amicus curiae*.

The amended application does not contain any material facts of significance not stated in the application denied by the Court last Term. The increase in domestic pumpage since 1930 has been shown to be insignificant. Complainants have made no specific allegations, aside from pure speculation, concerning the amount of domestic pumpage in the future.

Defendants have spent over $300 million in reliance on this Court's decree. Approximately an equal amount would have to be spent to rearrange the Sanitary District's facilities, if the sewage effluent is to be tunneled into Lake Michigan. Regardless of the amount spent by the defendants, the risk of polluting Chicago's water supply would be ever-present. (See 1950 and 1951 Reports of International Joint Commission.)

Defendants submit, therefore, that the complainants have not shown sufficient basis for granting them the injunctive or other relief they seek, and ask that the prayers of the amended application be denied and that the amended application be dismissed.

Respectfully submitted,

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