

ILLINOIS POLLUTION CONTROL BOARD
January 6, 1971

In the Matter of:)
DU PAGE COUNTY REGIONALIZATION) R 70-17

Opinion of the Board (by Mr. Kissel):

With the adoption of regulations regarding DuPage County Sewage Regionalization, R 70-17, the Board takes a most significant step forward in the conversion of the resources of the State -- both natural and economic resources. Natural resources, since the efficient operation of a series of strategically located regional plants will greatly minimize the pollutional load upon the DuPage County streams, thereby enhancing the use of the water resources in the County. Economic resources, since over the long-term period of years regional plants will result in significant dollars saved, both in construction and operating costs.

The adoption of this regulation insists that there be cooperation between the various governmental entities and private utilities whose statutory function includes sewage treatment. This cooperation will have to exist at the local level in order that a regional solution can be reached. Finally, this regulation imposes a time limit to reach that solution. As several days of hearings in DuPage County made abundantly clear, sufficient vacillation and position jockeying have occurred over the past fifteen years to demand that time limitations be imposed. Though this regulation does not anticipate immediate implementation of the Regional Program, it does demand that compliance be obtained over a reasonable period of time.

The hearing record in this regulatory matter demonstrates that the actual structuring of a regional solution to the proliferation of sewage treatment facilities in DuPage County must take place at the local level. Though the hearings received evidence as to the size, growth, and operation of the various treatment plants in the County, a much more localized hearing will be necessary in order to determine how each plant will fit into the projected growth pattern of the region, the suitability and projected physical life of each plant, and the geographic, political, and economic realities regarding the operation of each plant. To this end, the Board has incorporated into the regulation the DuPage

County Wastewater Regions map adopted by the Northeastern Illinois Planning Commission (NIPC); hearings will be held in each NIPC Region in order to determine that Region's Regional Plan. The Board will designate a Hearing Officer for each NIPC Region; he will be empowered to hold hearings on a Regional Plan and make recommendations to the Board. The Board shall then determine a Regional Program for each Region and give final approval to a Regional Wastewater Program for DuPage County.

[THE NEED FOR REGIONALIZATION]

The multiplicity of overlapping local governmental units was never better illustrated than in the proliferation of entities involved in the treatment of sewage in DuPage County. DuPage has sprouted an inordinate number of separate sewage treatment plants (81 in 1970, R. 342), many of them small indeed, and in many cases quite close to one another. Recent urban expansion away from Chicago has given DuPage a high population density and a considerable total population -- factors which favor regionalization of facilities, not fractionalization. Further, the topography of the County is such as to allow inexpensive transport of sewage to central locations.

Testimony received at the hearings in February and July, 1971, established that unnecessarily small plants constitute a threat of pollution. The Agency indicated that plants operating at larger capacities can generally be staffed with more competent personnel and can provide 24-hour operator coverage to insure proper operation. In its experience, the Agency has found that lack of proper operation is one of the largest single factors toward the degradation of water quality in Illinois streams (R. 339). Dr. Pfeffer of the Institute for Environmental Quality stressed that more competent operators were necessary in order to install an activated sludge sewage treatment plant; such a facility is capable of producing a higher quality of effluent than the less effective trickling filter operation (R. 183). The Board has recognized this fact by prescribing less stringent effluent standards for small plants (e.g. SWB-12, SWB-13, as amended by #R 70-3, January, 1971). Thus, when an area can support a larger sewage treatment facility, this Board must insist, in the interest of maintaining water quality, that this higher degree of treatment be provided. Dr. Pfeffer also noted the probability that advanced waste treatment methods required now or in the future will likewise be beyond the effective competence of small plants and their operators. For example, should some manner of ammonia nitrogen removal be required, (cf. Institute proposal of December 14, 1971), increased sophistication of operation would be demanded in the plant management.

The Agency also cited several other reasons for larger, more efficient facilities when possible. To operate the biological processes of a sewage treatment plant, accurate laboratory control tests are required. Such tests can only be made at plants properly staffed with qualified chemists (R. 339). Only the larger plant can maintain such facilities. Plants with larger capacities generally have three or more units designed for a function, thereby permitting any unit to be taken out of service for repairs, increasing the load to the other units by less than 50%. At smaller plants, generally only two units are provided for a function; these then become 100% overloaded when one unit is removed from service. Dr. Pfeffer graphically described such backup capacity:

"You have generally multiple units, which, if one of the particular units becomes inactivated for some reason, you can increase the load slightly to the remaining unit without markedly affecting the efficiency. If you are sitting here with a small plant that has one primary clarifier and you have to shut that clarifier down to replace the mechanism then all that water is bypassed, and in the past it has been letting raw sewage into the stream . . ."
(R. 185)

In addition, plants at larger capacities are not as susceptible to plant upset due to infiltration of storm water or inadvertent slugs of industrial wastes, since the larger facility has an inherent dilution capability. Larger capacity plants serve larger areas and, as such, the daily peak flows are a smaller percentage of the design average flow; this results in better overall daily treatment (R. 440).

The larger sewage treatment facility also incorporates several financial economies of scale. The Agency indicated that larger capacity plants generally have lower capital costs and lower operating and maintenance costs per million gallons. Pfeffer's testimony established this in detail (R. 176-82). Operating costs for a plant treating one million gallons per day are three times those of a plant treating 100 million gallons, on a per-gallon basis; construction costs are considerably higher as well. A study of the savings attained by regional sewage treatment was made in the area comprising Albany County, New York. For each of the eight affected municipalities to treat its own sewage would have cost \$78.5 million, required 110 operating personnel, and cost \$29.0 million for the first year. A regional two-plant system cost \$53.1 million, required only 35 operators, and was obtained at half the per capita cost.

The above evidence conclusively establishes the need for a Regional Sewage Treatment Program in DuPage County. This Board's conviction that a Regional Program is necessary for DuPage is supported by numerous groups within the County. The County has been pressing for regionalization since 1956 (R. 27). In February, 1971, the DuPage County Mayors and Managers Conference adopted a plan for regional treatment (R. 9). The County Board subsequently went on record as favoring the plan (R. 473). In 1968, the DuPage County Association of Sanitary Districts endorsed a plan for regional treatment (R. 20).

A regional solution, all the parties contend, awaits the designation of a county-wide agency with exclusive authority to construct and operate sewage treatment facilities throughout the county, and with adequate authority to raise money by appropriate means. Several bills introduced in the most recent legislative session would establish various regional authorities with the requisite financial powers, but all languished for lack of consensus over who is to be put in charge, who abolished and who expanded. (Cf. House Bills 1799, 2060, and 2613). This Board does not believe that it need await the establishment of a county-wide agency before a regional program can be implemented.

By the use of the powers granted them under the existing statutes, the present governmental entities in DuPage County can begin to move toward regionalization of sewage treatment facilities. The County, all municipalities, and all sanitary districts have authority to construct, acquire, and operate sewage treatment facilities (Ill. Rev. State, Ch. 24, Sec. 11-141-2 (municipalities); Ch. 34, Sec. 3111 (counties); Ch. 42, Secs. 306, 306.1 (sanitary districts)). All have the power of condemnation without regard for municipal or sanitary district boundaries. (Ch. 24, Sec. 11-141-2; Ch. 34, Sec. 3110; Ch. 42, Sec. 307). Municipalities and sanitary districts may accept and treat sewage from outside their boundaries (Ch. 24, Sec. 11-146-1; Ch. 42, Sec. 316); may contract with one another, if adjacent for the common construction or use of facilities (Ch. 24, Sec. 11-147-1); and may contract for the county to provide sewage treatment, with the local government paying its share of costs (Ch. 24, Sec. 11-147-5; Ch. 34, Sec. 3131). All these governmental bodies have authority to raise funds by revenue and general obligation bonds, by user and connection charges, by general taxation, and by special assessment under the new Constitution effective last July 1 (R. 168). Under the hearings to be held under this regulation, it is the Board's intent that the full use of such statutory authority be explored.

[EXPLANATION OF THE REGULATION]

In summary, the following steps would take place under the regulation. The Board will appoint a Hearing Officer for each of the nine regions. He will convene the various Parties in that region. The Parties shall then submit a Regional Plan to the Hearing Officer, who shall conduct hearings of these submissions and make recommendations to the Board. The Board shall then determine a Regional Program for each region and, after notice and publication, give its final approval to a Regional Wastewater Treatment Program for DuPage County. It is anticipated that all of the above steps will occur within approximately ten months of the adoption of this regulation.

The nine regions which the Board has designated are those which were approved by the Northeastern Illinois Planning Commission October 21, 1971. A DuPage County map designating those regions was prepared for the Board by NIPC and was made a part of this Chapter. For the purposes of the hearings under this regulation, those areas marked for the National Accelerator Laboratory and for the Bartlett-Hanover Park Wastewater Sector shall be considered as part of the northwest region on the map. Since the Proposed Final Draft of this Part was published for purposes of public comment November 23, 1971, the Board has received several comments from various municipalities and sanitary districts expressing particular reservations about one or another boundary line of a particular region. With adoption today, we do not change any of those boundaries originally proposed. Such minor changes as were suggested can be worked out by the various Hearing Officers and the Parties upon a proper showing in the course of the hearings.

The County of DuPage, all municipalities, sanitary districts, and public utilities presently having responsibility for the treatment of sewage in DuPage County shall be Parties in these proceedings. Since the Board's original proposal June 9, 1971, public utilities have been added as Parties. Such addition is principally due to the Agency's testimony that utility sewage treatment facilities have not been responsive to the pollution control programs of the State (R. 344). A Regional Program would then dictate that such facilities be phased out in favor of government-operated facilities capable of exercising bonding power and receiving State and Federal financial grants.

The Board shall designate a Hearing Officer for each of the nine regions. His initial responsibility will be to bring all the Parties within a particular region together. Working through the Board, his activities in a particular region shall be coordinated with that of Hearing Officers in neighboring regions. Once the Hearings Officer convenes the Parties, he shall direct their efforts.

to the preparation of a Regional Plan. He can schedule such public hearings, meetings, or pre-hearing conferences as he deems necessary. In any case, by April 1, 1972, all the Parties within a particular region shall submit a "Regional Plan" to the Hearing Officer and to the Agency. This Regional Plan may be submitted either jointly or individually by the Parties. This Plan should be structured in substantial accordance with the Regional Waste-water Plan approved by NIPC October 21, 1971.

Rule 1106 of this Part sets forth in ample detail the contents of the Regional Plan. Of particular note is a "phase-in, phase-out" schedule for each of the affected or proposed plants or plant expansions. The Plan must also contain a commitment as to which governmental entity will operate the plants and how such operation and expansion will be financed. Since the construction and maintenance of interceptor sewers is an integral part of the operation of a sewage treatment plant, a commitment is also demanded in this regard. Further, the Plan must be consonant with County and regional comprehensive growth and land-use planning. In other words, the sewage treatment facility must constitute an adequate service facility for the area which it serves and intends to serve.

The regulation also marks the first time that the Board has sought a recommendation from its Hearing Officers. Upon receipt of the Regional Plan, the Hearing Officer shall hold such further hearings as may be necessary in order for him to formulate recommendations to the Board by July 1, 1972. Rule 1107(b) indicates the contents of such a recommendation to the Board. Basically, the Rule seeks a "physical" layout from the Hearing Officer as to phasing out of plants, designation of new, interim or remote facilities, and construction of interceptors to accommodate new or expanded facilities. The Hearing Officer must also designate the governmental agency or agencies which will assume responsibility for treatment of sewage within his particular region. In making his recommendations to the Board, Rule 1107(c) proposes several considerations to the Hearing Officer. Two are of especially great importance. Provision may be made in the Regional Plan for continued service by smaller plants in areas remote from regional treatment facilities. Such a provision only underscores the Board's insistence that the Plan be technically and economically reasonable. Further, the Hearing Officer must take into account the service needed in areas presently unsewered. Rule 1111 provides that these areas must have their interests fully considered in these proceedings and places such burden upon the Hearing Officer and the Agency. This concern over presently unserved areas was one of the reasons

for the Board's hesitation to adopt a county-wide regional plan based upon the hearings already held in 1971. Before a Regional Program can be approved, the Board must be assured that such unserved areas are guaranteed service on a reasonable cost basis and only on reasonable conditions. The Board views sewage treatment facilities as a public service commodity which is to be provided in anticipation of and in response to the needs of the community. Planning for sewage treatment services and facilities is a vital part of community growth.

Rule 1108 indicates the contents of a Regional Program to be issued by the Board. Again, the Regional Program must establish the physical pattern of "phase-in, phase-out" of treatment plant and transport system expansion, and of new plant construction. Such should be in accordance with economic and technical feasibility and should take into account the predicted regional growth in the County. Most importantly, the Program must designate the governmental agency or agencies which will be responsible for sewage treatment within each of the nine regions.

The Environmental Protection Agency will participate in each of the proceedings in each region. It will also file a stated written recommendation for each region and for each treatment plant. The Agency shall also air in the enforcement of this Part by denying permits for any facility which does not conform with the Regional Program. Rule 1113 proposes only two exceptions to such a policy: for interim facilities in the event of a demonstrated emergency; for facilities of such small capacity as to create only an insignificant risk of inadequate treatment.

Overriding all other considerations under this Part, of course, is the Board's insistence that this regulation in no way relieves any person from the obligation to comply in all respects with existing and future regulations, both as to water quality standards and as to the implementation plan for DuPage County streams.

In promulgating this regulation, the Board shifts the onus of determining the manner of regionalization back to where it belongs -- the people and governmental bodies of DuPage County. By localizing the political traumas and governmental rivalries, we anticipate that a solution may become more easily available. We do not withdraw from the problem, however, but merely await a sifting out of the facts and the formulation of a Regional Plan. Then the case returns to the Board, for the institution of a Regional Program. It is our earnest hope that the Plan presented by the Parties constitutes a detailed, viable solution such that the Regional Program approved by the Board need only be a stamp of approval.

The Board hopes that this regulation will provide an impetus and perhaps a model to other similarly urbanized counties throughout Illinois. Lake, McHenry, Kane, Will, Madison, and St. Clair Counties are only a step away from the sewage treatment problems which engulf DuPage County.

I, Christan L. Moffett, Clerk of the Pollution Control Board, certify that the Board adopted the above Opinion this 6th day of January, 1972, by a vote of 4-0.

Christan L. Moffett
Christan L. Moffett
Clerk of the Board

ILLINOIS POLLUTION CONTROL BOARD

January 6, 1972

In the Matter of)
)
DU PAGE COUNTY SEWAGE) # R70-17
REGIONALIZATION)

CHAPTER IV: WATER POLLUTION
PART 11: Regional Sewage Treatment

1101 Preamble: The proliferation of numerous small sewage treatment plants in densely populated and rapidly developing Du Page County constitutes a severe and intolerable impediment to the correction of present water pollution and a continuing threat of additional pollution in the future. Not only do the higher unit costs of constructing and operating small plants waste finite dollars and therefore contribute to pollution; small plants cannot produce as satisfactory an effluent as can larger plants, because they cannot provide certain types of sophisticated treatment, because they cannot practically be adequately supervised or maintained, and because they cannot provide adequate standby treatment capacity to prevent pollution in the event of a malfunction. The establishment or continued operation of sewage treatment plants so small as to exhibit these deficiencies, in areas such as DuPage County where the population density is high enough to make larger plants economically feasible and indeed economically far more desirable, is contrary to the anti-pollution policy of the Environmental Protection Act. The nine service-area concept for DuPage County proposed by the Northeastern Illinois Planning Commission sets forth a reasonable geographical basis upon which to base a regionalization scheme in DuPage County and the Board endorses this concept in principle. All regionalization efforts made under this Chapter shall be directed toward a reduction in the number of sewage treatment facilities at the earliest reasonable deadline. A series of regional plants, well-operated and strategically located, will greatly minimize the pollutional load upon the DuPage County streams and assure conformance with the Environmental Protection Act.

In order to accomplish the above goals, the Board will appoint a Hearing Officer for each of the nine regions; he shall bring the various Parties in that region together; either jointly or individually, the Parties shall submit a Regional Plan to the Hearing Officer; the Hearing Officer shall conduct hearings on these submissions and make recommendations to the Board; based on these recommendations, the Board shall determine a program for each region, and, after publication, give final approval to a regional wastewater treatment program for DuPage County.

- 1102 Regions. The nine regions in DuPage County shall be as designated and approved by the Northeast Illinois Planning Commission October 21, 1971, subject to such changes as the Board shall make as a result of hearings held under this Part. Such designation is depicted on the DuPage County map which is made a part of and attached to this Chapter. The two areas marked for the National Accelerator Laboratory site and the Bartlett-Hanover Park Wastewater Section shall for purposes of this regulation be considered as part of the northwest region indicated on the map.
- 1103 Parties. The County of DuPage, all municipalities, sanitary districts, and public utilities presently having responsibility for the treatment of sewage shall be Parties in these proceedings. The failure of any such Party to appear or participate shall bind that Party as to any proceedings or rulings made by the Hearing Officer of the Board under this Part.
- 1104 Hearing Officers. The Board shall designate a Hearing Officer for each of the nine regions. It shall be the responsibility of the Hearing Officer, as a representative of the Board, to bring together all the Parties within the particular region. The Hearing Officer shall have all such powers as are granted to hearing officers under Part II of the Procedural Rules and Regulations of the Board.
- (a) Upon appointment, the Hearing Officer shall notify all Parties within the region, the Environmental Protection Agency, and the Northeastern Illinois Planning Commission of his intent to hold public hearings on the implementation of this Part.
- (b) Within thirty (30) days of the effective date of this Part, the Hearing Officer shall schedule an informal meeting with all Parties within the particular region.

- (c) The Hearing Officer shall schedule such subsequent pre-hearing conferences, meetings, and public hearings as may be necessary to the preparation of a Regional Plan for the particular region.

1105 Submission of Regional Plan. On or before April 1, 1972, all Parties within a particular region shall file with the Environmental Protection Agency and with the Hearing Officer for that region a "Regional Plan" for the regionalization of sewage treatment facilities within that region. The Parties may submit the Regional Plan either jointly or individually. All Parties shall attempt to structure the Regional Plan in substantial accordance with the Regional Wastewater Plan approved by the Northeastern Illinois Planning Commission, October 21, 1971.

1106 Content of Regional Plan. The Regional Plan to be submitted under Section 1105 shall provide the following:

- (a) A "phase-in, phase-out" schedule for each of the plants which, inter alia, shall take into account the technical feasibility and economic reasonableness of continuing service at each of the affected plants;
- (b) A description of the location, capacity, treatment facilities, cost, and service area for the proposed plant(s) that is (are) to accept and treat the sewage from the geographical area involved;
- (c) A firm commitment by one or more responsible governmental agencies to construct and operate the proposed plants, together with a firm schedule for design, award of contracts, commencement of construction, full operation, and abandonment of obsolete plants;
- (d) A firm commitment by one or more responsible governmental agencies to construct and maintain any interceptor sewers made necessary by the Regional Plan;

- (e) A firm commitment by the affected governmental agencies for the financing of the necessary facilities, through taxation, user charges, revenue and general obligation bonds, special assessment, connection charges, loans, grants, contracts, or otherwise;
- (f) An attorney's opinion affirming and explaining the authority of the responsible governmental agencies to carry out their undertaking as described;
- (g) Assurance that the plan conforms with Rule 1105 of this Chapter and with all applicable regulations respecting air and water pollution and the disposal of solid waste;
- (h) Assurance as to what interim measures will be provided regarding sewage treatment, including water quality standards;
- (i) Assurances that such a Plan is consistent with County and regional comprehensive growth and land-use planning.

1107 Recommendations of Hearing Officer.

- (a) Upon receipt of the Regional Plan, the Hearing Officer shall schedule such further hearings as may be necessary in order for him to formulate his recommendations to the Board under this Chapter.
- (b) By July 1, 1972, the Hearing Officer in each region shall submit to the Board his recommendations as to how the Board should implement the regional concept in the particular region. The Hearing Officer's recommendation shall:
 - (1) Detail the phasing out of plants;
 - (2) designate plants as either interim, remote or regional facilities;
 - (3) designate the governmental agency(s) which will assume responsibility for sewage treatment;

- (4) evaluate the need for extensions to interceptor sewer lines before regionalization can be realized;
 - (5) list facilities which must be constructed or expanded, and to what capacity at what time, and;
 - (6) state any additional findings of facts or conclusions of law which may be necessary for the Board to evaluate the Regional Plans and recommendations of the Hearing Officer, and to make a decision regarding the program to be adopted for any one region, under Section 1108, herein.
- (c) In formulating his recommendations to the Board, the Hearing Officer shall consider:
- (1) The economic reasonableness and technical feasibility of the various regional alternatives;
 - (2) the assurances of service offered by the Parties, including their willingness to assume a greater responsibility for sewage treatment;
 - (3) the need for future service in areas presently unsewered;
 - (4) the need for continued service by smaller plants in areas remote from regional treatment facilities.
- (d) A transcript of the proceedings and the original exhibits shall be transmitted to the Board.

1108 Issuance of Regional Program. After receipt of the recommendations from the Hearing Officer, the Board shall issue a Regional Program for each of the nine regions, which Program shall provide specific findings as to each region as to how regionalization will be accomplished. This Regional Program, inter alia, shall include the following:

- (a) Designate those plants to remain in service, to be constructed, or expanded as regional plants

and those plants to be designated as interim facilities, with specific "phase-in, phase-out" dates where applicable;

- (b) Designate in each of the nine regions the governmental agency(s) responsible for sewage treatment;
- (c) Delineate areas of future growth within DuPage County, making provision for regional sewage treatment plant expansion when necessary;
- (d) Provide for a sufficient transport system under the control of a responsible governmental agency in order to carry sewage to the regional treatment plant;
- (e) Evaluate the ability of each regional sewage treatment plant to handle its present and projected capacity consonant with predicted growth patterns within DuPage County;
- (f) Provide that presently unserved areas are guaranteed service on a reasonable cost basis and without the imposition of unreasonable conditions before hookup is allowed.

1109 Publication by the Board. Upon the issuance of a regional program by the Board, it shall give public notice in accordance with Board Procedural Rules 211 and 212.

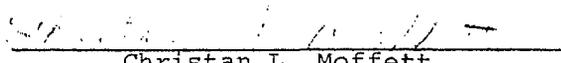
1110 Public Notice. All proceedings held under this Part shall be public. Public notice shall be given of all proceedings in accordance with Board Procedural Rule 205.

1111 Unserviced Areas. The Hearing Officer and the Environmental Protection Agency shall assure that those areas presently unserved by any sewers or sewage treatment facility have their interests fully considered in these proceedings.

1112 The Role of the Agency. The Environmental Protection Agency shall participate in each of the proceedings in the nine regions. Within thirty (30) days of the filing of a Regional Plan by Parties, the Agency shall file a stated written recommendation for each region and for each treatment plant.

- 1113 Future Construction. No permit shall be granted for the construction or operation of any additional sewage treatment plant in DuPage County, except for interim facilities in the event of a demonstrated emergency, that does not conform with the principles of the Regional Program described in Section 1108 of this Chapter, or that is of capacity so small as to create an insignificant risk of inadequate treatment, according to the policies expressed in Rule 1101 of this Chapter.
- 1114 Other Regulations Preserved. Nothing in this Part shall relieve any person from the obligation to comply in all respects with any existing or future regulations, including but not limited to the water quality standards and implementation plan for streams in DuPage County.

I, Christan L. Moffett, Clerk of the Pollution Control Board, certify that the Board adopted the above Order this 21 day of January, 1972, by a vote of 4/0.



Christan L. Moffett,
Clerk of the Board