Work of the Interstate Sanitation Commission*

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THE Interstate Sanitation Commission is a tri-state agency of New York, New Jersey, and Connecticut, established in 1936, for the purpose of controlling future pollution and abating existing pollution in New York Harbor and the adjacent waters. Its jurisdiction, in general, covers New York Bay and that portion of the Hudson River up to Bear Mountain Bridge, Long Island Sound up to New Haven on the Connecticut shore and Port Jefferson on the northern shore of Long Island, and the ocean front from Sandy Hook, N. J., to Fire Island Inlet on the south shore of Long Island.

Let us inquire the reason for the creation of such a body as the Interstate Sanitation Commission. Going back to the early days of sanitation, one finds that the primary purpose was the collection of sewage and its disposal by burial or by dilution. With the advent of water carriage system by which the pollution was transmitted through pipes in water suspension, it was only natural that this material be carried by the shortest route to the nearest stream or body of water. It is not surprising therefore to find that up until the end of the 19th century, all of the municipalities in this area used the Hudson and East Rivers, New York Bay, Long Island Sound, and the Atlantic Ocean and the various tributaries for that purpose.

It is hardly conceivable that the engineer of those early days could have anticipated a growth of population so great that these enormous bodies of tidal waters would be unable to assimilate the load. The huge increase in population, not alone of New York City but of the adjacent municipalities in the Metropolitan area, soon placed a load on these waterways which gave evidence of taxing their capacity of assimilation, and at the turn of the century, this condition was well recognized. As far back as 1903, the New York State Legislature appointed the New York Bay Pollution Commission. Its report showed conclusively the immediate need of sewage treatment but, though the need was recognized, a quarter of a century passed before even the first steps of any consequence were taken to correct the situation. Although numerous reports were prepared, it was not until 1936 that this tri-state commission was formed.

This Commission is the first inter-state agency charged with the actual duties of pollution abatement and clothed with authority to require municipalities and other entities to take steps to abate pollution. The laws establishing the Interstate Sanitation Commission fix the quality of the effluent which may be discharged by any sewage treatment works. It gives the Commission the right to conduct

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hearings, to investigate conditions, to determine if the creation of a temporary source of pollution would be in the best public interest, and to issue orders directing the discontinuance of pollution and prescribe specific progress that should be made at definite times prior to the final date fixed in such order. The Commission is given authority to bring action in the appropriate court to compel the enforcement of the provisions of the Tri-State Compact or of the orders of the Commission.

It may be seen therefore that it is no longer necessary to attempt to prove a menace to public health or a public nuisance, but instead the condition is judged on physical, chemical, and bacteriological standards.

In what manner does the Interstate Sanitation Commission function? There appear to be several fundamentals which, although not formally expressed, seem to have governed the course of the Commission from its beginning. The first has been to co-operate fully with the State Departments of Health and other state and local agencies, while the second has been to bend every effort toward accomplishing its objectives by persuasive means rather than relying on court action.

At first glance, one would think there is an overlapping of authority by this Commission and various state health departments, and the State Water Commission in Connecticut. This has not proved to be so. The State Health Departments proceed in their usual manner to bring about the construction of pollution abatement works, and where the state agencies do not have authority to require the abatement of pollution because of the difficulty of proving a public health menace or public nuisance, this Commission is in a position to lend its efforts toward this end. The Commission is also empowered to prescribe in its order certain specific progress that shall be made at definite times prior to the final date fixed in such order. This allows us to keep our hand directly on the pulse of the activity and should a municipality or other agency fail to make suitable progress, it is not necessary to wait until the date fixed for the completion of the plant has passed before action is taken.

Neither do the activities of the Commission and those of the State Health Department overlap in determining the character of treatment works to be constructed. Although the Compact establishes certain standards which must be met by the effluent from that plant, the approval of the plans for the plant is entirely in the hands of the State Department of Health which reviews the plans, keeping in mind that the plant shall be of such a nature or character that it will be able to produce an effluent to meet the Compact requirements. Should the Department of Health deem that a higher degree of treatment is desirable, it is entirely within their jurisdiction to require it. It is only when the plant is completed and in operation that this Commission assumes the authority to require that the plant effluent meet the Compact standards.

When the Tri-State Compact was drafted, it was recognized that a single standard should not be established for the entire district, but should be varied for discharges into waters used for different purposes. When waters are expected to be used for recreational purposes, shellfish culture, or the development of fish life, the pollution before being discharged into these waters must be so treated as to remove 60 per cent of the suspended solids, to reduce the coliform organisms to not more than 1 per ml. in 50 per cent of the samples, and to treat the polluting material so that the dissolved oxygen of the waters in the vicinity of the outfall shall not
be less than 50 per cent saturation during any week in the year.

When the pollution enters an area which is not expected to be used for the purposes above enumerated, that is to say, an industrial area, the standards are very much more lenient and require a removal of only 10 per cent of the suspended solids and a reduction in the oxygen demand so that dissolved oxygen in the vicinity of the outfall shall not be less than 30 per cent saturation during any week of the year.

It may be seen therefore that one purpose for creating the Commission was to coördinate and, if necessary, require the construction of sewage treatment works. It has a further purpose, and that is to see that the plants within the District operate in such a manner as to discharge an effluent which meets Compact standards. The means by which the Commission operates to carry out these two functions are briefly as follows:

Construction of Sewage Treatment Works

The Commission undertakes an educational campaign among the citizens and municipal authorities to make them cognizant of the need as well as advantages of pollution abatement and the construction of sewage treatment works. This is carried out by press releases and appearances before various service groups and the like. Conferences are held with municipal officials, and an attempt is made to discern the difficulties inherent in each individual problem. If necessary, hearings are ordered and an honest effort is made to determine how rapidly the municipality can undertake a pollution abatement program. Not infrequently the financial condition of a municipality is such as to make immediate construction of sewage treatment works a hardship. The Commission staff may review the financial status of the municipality and its bond redemption program. From such a financial study, it may be possible to fix a reasonable date at which the municipality can undertake a pollution abatement program.

It is usually possible to provide funds through sewer rentals, by issuing self-liquidating bonds even in excess of the statutory bond limitation. It has been the Commission’s policy, however, to permit the municipality, wherever possible, to choose its own means of financing, providing vigorous effort is made to bring about pollution abatement at a reasonable date.

Following this, the Commission in the past has permitted municipalities to defer action from 5 to 8 years if a constructive program was established which would ultimately place a municipality in a financial position to undertake the cost of constructing the necessary works to abate pollution. After a hearing has been held to establish a program which can be met by the municipality and which is reasonably in line with the general program of advancement in the District, the Commission issues an order setting forth not only the time when pollution shall have been abated, but, likewise, intermediate steps such as the engagement of an engineer, and designating the date for the beginning of construction. By fixing these preliminary dates in the order, the Commission can at an early time determine if a municipality is proceeding with sufficient vigor to meet its ultimate goal. Should there be some delay in the preliminary dates, investigations are made, and, if warranted, an extension is granted. The Commission has not yet encountered a condition where an extension of time was not warranted; however should that occur, it is reasonable to assume that legal proceedings would be instituted to enforce the provisions of the order. I repeat—the Commission bends every effort toward obtaining the coöperative action on the
part of the municipality, and it sincerely hopes that it will not become necessary to institute legal action at any time.

In this connection, there is another phase of Commission activity which is of interest. The law provides that no new source of pollution shall be created in the Interstate Sanitation District unless the Commission shall find after due investigation and hearing that such new source of pollution is in the best public interest. As a result, a number of hearings have been held to determine if a new area about to be sewered or a sewer district desired by a municipality best serves the public interest. In each case where the Commission has found the construction of such sewers and sewer outlets to be in the best public interest, an order has been issued, so finding, but with provisions fixing the time when pollution abatement works shall be constructed.

Plant Operation

The second phase of the Commission’s activities is concerned with the operation of sewage treatment works. This requires periodic inspections of the various plants during which half hourly samples of the influent and effluent are taken, and a morning and afternoon composite is made. Two basic tests determine compliance with Compact requirements: amount of suspended solids and number of coliform organisms. In addition, we observe the flow, the hydrogen ion concentration in the influent and effluent, and the residual chlorine. We also make determinations of settleable solids and biochemical oxygen demand.

Up to the present time, no effort has been made to make any routine tests of the dissolved oxygen in the vicinity of the outfall. During 1939, a very complete dissolved oxygen survey of all the waters of the Interstate Sanitation District was made, and when funds are available we hope to repeat this survey, thereby showing the trend throughout the Interstate Sanitation District. Dissolved oxygen in the vicinity of the outfall has been studied only in certain critical cases and where it seems that such information will be of special value in connection with the Commission’s activities.

In closing, it might not be remiss to outline the manner in which an interstate agency of this character is created. Unfortunately, heretofore, pollution conditions had to become sufficiently aggravated to arouse public opinion to demand some organized program to accomplish the abatement of pollution. It is to be hoped that present experiences may make it possible to establish these programs before conditions become acute. However, let it be remembered when timing such action that even with the greatest cooperation on the part of all concerned, it is likely to take 5 years or more to bring about the accomplishment of an interstate compact.

In the case of the Interstate Sanitation Commission, the Legislatures of three states involved appointed a commission for the purpose of framing a suggested treaty and accompanying legislation. On such a legislative commission should be representatives of the state agencies involved in the program: namely, the state health departments and, as in Connecticut, the State Water Commission, as well as the agencies having to do with fish and shellfish propagation; members of the Legislature, preferably those who are members of the Legislative Committees on Interstate Cooperation; representatives of business and industry. The work of such a commission is not to be lightly considered. It requires a great deal of investigation and a broad administrative outlook in order to develop a satisfactory well rounded compact. Appropriations should be available to engage a staff to make such research as may
be necessary to supplement that which might be available through such state agencies as the department of health, etc. With such a background, the next step would be the actual adoption of the proposed measure by the various legislatures, if possible, with provision that the compact become operative before all of the proposed group have adopted it.

Interstate agreements for various purposes are not new. Many compacts, treaties, and agreements have been entered into between various states, having to do with many subjects, such as water supply, power, fisheries, fishing rights, crime and police powers, and innumerable others. The subject of pollution however, although an old problem in interstate waters, has only recently been the subject of formal joint action by the interested states.

The form of these interstate treaties or compacts follows two general lines:

The first, establishing a commission charged with certain responsibilities and authority to require the execution of its orders.

The second provides for a commission or other agency which after study and conference recommends action to be undertaken and executed by the various states or departments within the state.

Both forms have been used for about eight years and satisfactory progress has been made in pollution abatement under both methods. The Interstate Sanitation Commission falls under the first category.

Subsequently all of the federal bills concerning pollution abatement that have been introduced in Congress recognize existing interstate compacts and encourage the formation of interstate commissions and agreements. The need for pollution abatement control is being more widely accepted as time goes on, and there is every reason to believe that pollution in interstate waters can be controlled and abated by the cooperative action of the several states involved, through interstate compacts or treaties.