

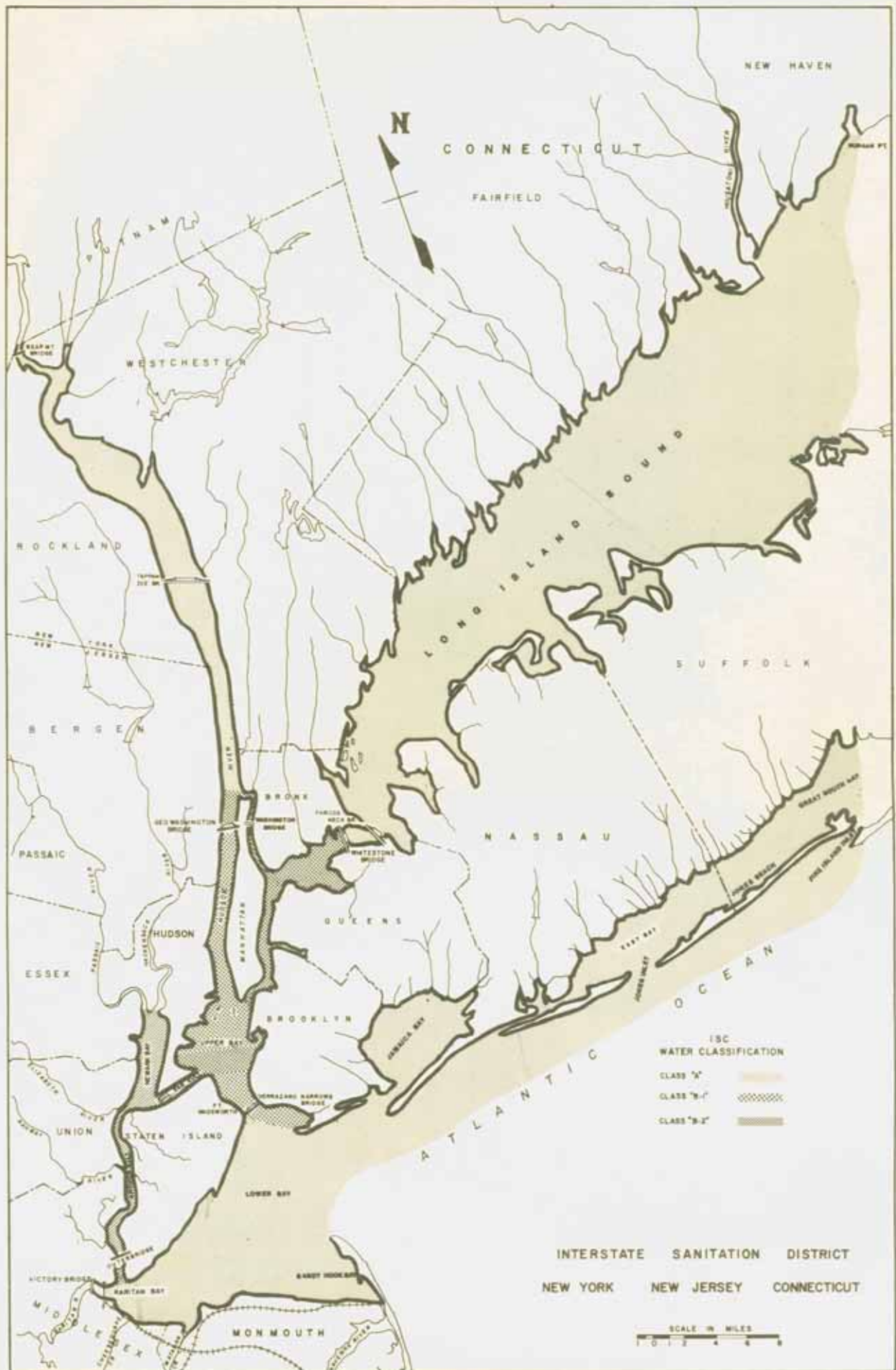
# INTERSTATE SANITATION COMMISSION

*A TRI-STATE ENVIRONMENTAL AGENCY*



COMBINED SEWER OUTFALLS  
IN THE  
INTERSTATE SANITATION DISTRICT

NEW YORK    NEW JERSEY    CONNECTICUT



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A TRI-STATE ENVIRONMENTAL AGENCY  
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## COMBINED SEWER OUTFALLS IN THE INTERSTATE SANITATION DISTRICT

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## EXECUTIVE SUMMARY

Because combined sewer systems account for much of the infrastructure in its District, the Interstate Sanitation Commission believed that a study to investigate combined sewer overflow (CSO) outfalls in the District would be valuable for long-term pollution control planning. This is especially so because with the ongoing construction to upgrade publicly owned treatment works (POTWs) throughout the District, CSOs will remain the major region-wide source of untreated sanitary waste discharging into the District. As part of this study, the Commission began to catalogue and to assemble data on CSO outfalls in all of the areas where they exist in its District.

This Report has focused on the CSO outfall rather than the overflow. The outfall is the structure through which an overflow from a combined sewer system discharges to a receiving water. A combined sewer system is one in which the municipal wastewater system does not have separate storm and sanitary sewer lines. Under dry weather conditions, a properly functioning combined system carries only sewage. During storms, however, it also collects and transports storm water runoff. These systems are designed to divert the combined wastewater at the regulators when its volume exceeds the capacity of the sewer lines. This diversion protects the sewer lines and the POTW. It also results in the discharge of raw sewage into the receiving water, unless a mechanism for storage or treatment has been incorporated into the system. Such a diversion, with the same results, can occur during dry or wet weather, in combined or separate systems, due to inflow or infiltration into the system or undersized, inadequate or poorly maintained equipment.

The Commission's District is shown on Map I-1. The District extends from the northern boundary of Westchester and Rockland Counties on the Hudson River and a line west from New Haven, Connecticut to Port Jefferson on the northern shore of Long Island, down through the Hudson and East Rivers, the Kills around Staten Island, Newark Bay, and the Upper and Lower Bay to Sandy Hook and a portion of the Atlantic Ocean. This area includes waterbodies that are heavily polluted with industrial waste, as well as waterbodies that are

appropriate for swimming, fishing, shellfishing, and other primary contact recreation. It encompasses rich commercial and recreational resources surrounding one of the most populous areas in the world.

This study is the first and only effort to gather CSO data on a region-wide basis. Although municipal CSO or regulator studies analyzed certain municipal systems, any larger analysis was beyond the scope and responsibility of any one of the governmental bodies that had generated such a report. For this reason, the Commission, as the interstate environmental agency in the metropolitan area, undertook this broad investigation.

The highlighted shoreline on Map I-2 shows the areas within the District where CSOs are located. Based on available information, the Commission has identified approximately 680 CSO outfalls in the District. For purposes of this Report the outfalls from the few separated sewer systems or unsewered areas that discharge during dry or wet weather are included in this number.

The discussion of the CSOs in the District is organized by waterbody for this Report. The reason for organizing in this way is simply that it provides discrete areas on which to focus efforts to remedy overflows. By viewing the entire District in this manner, it is possible to identify waterbodies where CSOs have the greatest impact and where CSO reduction would lead to the greatest water quality improvement. In addition, this type of analysis by waterbody is particularly helpful when it crosses jurisdictional boundaries, as do most waterbodies in the District. Unsanitary overflows are a regional problem, not confined to one municipality or even to one state.

The nine sections into which the District has been broken for this Report are shown on Map I-3. The chapters discuss the following waterbodies: 1) Western Long Island Sound; 2) the East River; 3) the Harlem River; 4) the Hudson River; 5) the Upper Bay; 6) the Kills and Newark Bay; 7) the Lower Bay; 8) Jamaica Bay/Rockaway Inlet; 9) the Atlantic Ocean. The final chapter summarizes the conclusions and recommendations from the Report.

The goals of this first phase of the Commission's ongoing study of CSOs in its District were to locate as many CSOs as possible, to identify areas in which information was unavailable or unclear, and to discover what action is being taken by the responsible municipalities to eliminate them. These goals were accomplished through field investigations, review of reports and maps, and conversations with local and state officials.

The recommendations emerging from the review of available information can be placed into two categories--data gathering and interjurisdictional coordination. Within these two categories, six specific recommendations apply to all of the waterbodies discussed in this Report:

1. Require a comprehensive outfall inventory of each permit-holding municipality or agency;
2. Identify each outfall in addition to each regulator overflow;
3. Reconcile all contradictory outfall and regulator information;
4. Obtain statistically valid sampling data on volume and constituents being discharged from outfalls;
5. Coordinate among jurisdictions to develop a plan and priorities for action;
6. Initiate action to abate and, where possible, to eliminate CSOs.

First, additional information would be useful in formulating an effective program to control or, where possible, eliminate, CSOs. Emphasis should be placed on inspecting outfalls in the District. Municipalities must obtain information on all outfalls within their jurisdiction and verify the accuracy of the information already assembled. Due to the magnitude of the task and its limited resources, the Commission was unable to make the large scale effort necessary to inspect all of the outfalls in the District. The

Commissions has inspected and will continue to inspect as many as possible within its budgetary and programmatic constraints. Also CSO sampling should be planned to determine the constituents of the wastewater. Although some of this sampling has been done, no properly validated, comprehensive reports of such sampling exist.

Second, governmental bodies in the District should convene to discuss CSO abatement strategy on a regional level. In such a forum it will be possible to look at the District as a whole and to establish methods of prioritizing the segments of waterbodies where, with the concerted efforts of all of the municipalities involved, amelioration of CSOs could lead to notably improved water quality. Each waterbody in the District has its own unique characteristics and each governmental body adjacent to the waterbody has specific needs or goals relating to that waterbody. Thus, for any CSO control plan to be effective, all relevant municipalities must be in communication and reach some type of consensus about the plans for the waterbody.

As a follow-up to this phase of the program, the Commission proposes to convene a CSO conference to which it will invite the relevant governmental entities that have jurisdiction over CSOs in the District. This conference will provide an opportunity for the beginning of interjurisdictional communication.



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