INTERSTATE SANITATION COMMISSION

A TRI-STATE ENVIRONMENTAL AGENCY

1984

ANNUAL REPORT

NEW YORK NEW JERSEY CONNECTICUT

1 9 8 4

R E P O R T

OF THE

INTERSTATE SANITATION COMMISSION

ON THE
WATER POLLUTION CONTROL ACTIVITIES
AND THE
INTERSTATE AIR POLLUTION PROGRAM

INTERSTATE SANITATION COMMISSION

A TRI-STATE ENVIRONMENTAL AGENCY

311 WEST 43rd STREET • NEW YORK, N.Y. 10036

AREA CODE 212-582-0380

January 24, 1985

To His Excellency, Mario M. Cuomo
His Excellency, Thomas H. Kean
His Excellency, William A. O'Neill
and the Legislatures of the States of New York,
New Jersey, and Connecticut

Your Excellencies:

The Interstate Sanitation Commission respectfully submits its report for the year 1984.

The members of the Commission are confident that with the continued support of the Governors and the members of the Legislatures, the Commission will maintain active and effective water and air pollution abatement programs.

Respectfully submitted,

For the State of New York — Chairman

For the State of Connecticut — Vice Chairman

For the State of New Jersey — Vice Chairman

INTERSTATE SANITATION COMMISSION

COMMISSIONERS

NEW YORK

Natale Colosi, Ph.D.,
Chairman
George Dumbach
Fred C. Hart
Anthony T. Vaccarello
Henry G. Williams

NEW JERSEY

Samuel P. Owen,
Vice Chairman
J. Richard Goldstein, M.D.
Lester H. Grubman
Robert E. Hughey
Frank A. Pecci

CONNECTICUT

John P. Clark,
Vice Chairman-Treasurer
Helen Carrozelli
Joseph I. Lieberman
Douglas S. Lloyd, M.D.
Stanley J. Pac

***

*

*

Alan I. Mytelka, Ph.D.
Executive Secretary

Mitchell Wendell, Ph.D.
Counsel

INTERSTATE SANITATION COMMISSION

STAFF

Alan I. Mytelka, Ph.D.
Director & Chief Engineer

Howard Golub
Assistant Chief Engineer

Mitchell Wendell, Ph.D.*
General Counsel

Engineering

Peter L. Sattler
M. Mehdi Rahimi-Alangi
Henry W. Anusiak
Frank V. Filippo

Laboratory

Joseph S. Czachor
John I. Chen, Ph.D.
Chin-Chang Jeng
William Preston

Field Investigation

William M. McCormack
Walter Pyrch
William J. Edwards
Elliott Rodriguez

Administrative

Carmen L. Leon
Margret E. Levy
Valentini Tsekeridou
Leosilda Lopez

* Retired 9/30/84

C O N T E N T S

I L L U S T R A T I O N S

I. SUMMARY OF ACTIVITIES

The Interstate Sanitation Commission was created in 1936 by a compact between the States of New York and New Jersey for the abatement of existing water pollution and the control of future water pollution in tidal waters of the New York Metropolitan Area. The State of Connecticut joined the Commission in 1941. In 1962, air pollution was added to the scope of the Commission's activities and in 1970 the Commission was designated as the official planning and coordinating agency for the New Jersey-New York-Connecticut Air Quality Control Region.

This report is prepared each year and provides a record of the water and air pollution activities of the Interstate Sanitation Commission. It focuses on technical assistance, planning, laboratory analyses, monitoring, and coordination activities provided by the Commission which lead to the resolution or amelioration of environmental problems within the Commmission's water and air pollution areas of jurisdiction.

WATER POLLUTION

This year, as in the past, the Commission's program for water pollution abatement continued to provide assistance for effective coordination and decision making on a regional basis. Emphasis was placed on disinfection of effluents, evaluation of applications for lesser treatment, minimization of the effects of combined sewers, pretreatment of industrial wastes, compliance monitoring, ocean disposal, and enforcement.

Within the District, planning and construction are well underway to provide a higher degree of quality for discharged wastewater. It is estimated that more than $2.8 billion has been allocated for this purpose by the governmental units involved.

In 1983, the State of New Jersey requested the Commission to investigate what could be done to make year-round shellfishing possible in Raritan Bay. Presently, varying disinfection policies exist within the Interstate Sanitation District. The Commission held public hearings in 1984 on year-round disinfection as a general health measure and as a means of improvement of shellfisheries. In September 1984, the Commission adopted an amendment to its Water Quality Regulations, effective July 1, 1986, that requires dischargers throughout the District (except for the Hudson River north of Yonkers, New York) to meet the ISC coliform requirements year-round.

In 1983, the Commission denied concurrences to all Publicly Owned Treatment Works (POTWs) within the District that applied for waivers to discharge effluents at less than secondary treat-

ment under the provisions of Section 301(h) of the Clean Water Act (CWA). Most of the POTWs chose not to submit the one reapplication allowed by the CWA. The several communities that did reapply this year were denied concurrences by the Commission. One reapplication is in process and will not be ready for reconsideration by the Commission until 1985.

The Commission continued to monitor waste discharges from public and private treatment plants to check compliance with ISC and N/SPDES permit requirements. Sampling of the waters of the District also continued.

The laboratory continued to administer the practical examination to applicants for New York State Grades II and III Sewage Treatment Plant Operator certifications.

On May 1, 1984 the Commission, in cooperation with Wagner College, sponsored a symposium entitled "Regional Aspects of Environmental Problems". Presentations were made by government officials on the federal, state, and local levels as well as ISC Commissioners, environmental agencies and environmental organizations. The symposium resulted in a better understanding of the interrelated nature of environmental problems in this Region and created a forum to discuss those problems.

AIR POLLUTION

The Commission continued its role as coordinator of the High Air Pollution Alert and Warning System in the New Jersey-New York-Connecticut Air Quality Control Region.

The Commission continued to work closely with its member states regarding the interchange of data. Daily air quality and meteorological data received at the ISC office were transmitted to all concerned agencies.

From October 1983 through September 1984, the Commission received 1790 air pollution complaints, an increase of 55% over the previous 12-month period. The majority of the calls came from Staten Island residents. In order to respond in a timely and effective manner, the Commission maintained its field office on Staten Island. In November 1984, the Commission added an inspector to its staff and increased coverage at the field office to 7 days a week for one shift and added a second shift several days a week.

The Commission took part in several New York and New Jersey hearings related to various aspects of air pollution.

II. WATER POLLUTION

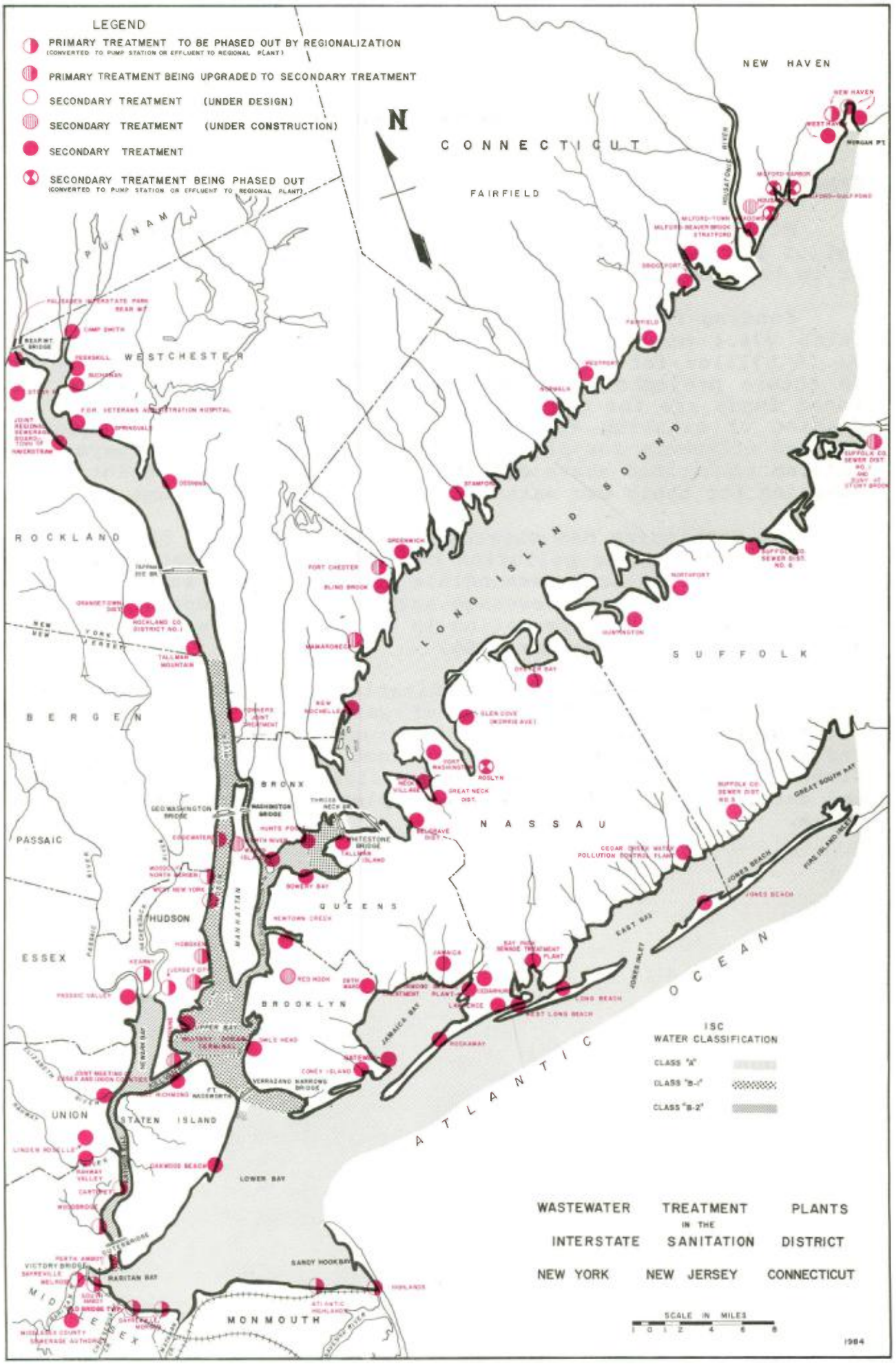
GENERAL

Within the Interstate Sanitation District, there were a total of 172 water pollution control projects completed, underway, or in the planning stage during the past year.

Funding for these projects amounted to over $2.8 billion of which $76.4 million was for 43 projects completed this year, $1.15 billion for 79 projects in progress, and $1.6 billion for 50 future projects. These expenditures of federal, state, and local funds are for new wastewater systems and expansion and upgrading of existing facilities in order to provide adequately treated effluents for discharge into the District waterways. The funding summarized above does not include large sums spent by industries for their own water pollution control programs.

The Commission has obtained the technical and fiscal information for the water pollution control projects described in the following section from responsible persons within state and local governmental agencies, sewerage authorities, and consulting engineering firms. The information in this section is that which was available through November 1984.

A map of the Interstate Sanitation District, on the following page, shows the locations of wastewater treatment plants which discharge into District waterways, the type of treatment and status of each plant, and the Commission's water classifications. Information pertaining to flows, tributary population, and date of construction for these plants is contained in Appendix A.


LEGEND
PRIMARY TREATMENT TO BE PHASED OUT BY REGIONALIZATION
(CONVERTED TO PUMP STATION OR EFFLUENT TO REGIONAL PLANT)
PRIMARY TREATMENT BEING UPGRADED TO SECONDARY TREATMENT
SECONDARY TREATMENT (UNDER DESIGN)
SECONDARY TREATMENT (UNDER CONSTRUCTION)
SECONDARY TREATMENT
SECONDARY TREATMENT BEING PHASED OUT
(CONVERTED TO PUMP STATION OR EFFLUENT TO REGIONAL PLANT)
N
NEW HAVEN
CONNECTICUT
FAIRFIELD
PUTNAM
WESTCHESTER
ROCKLAND
BERGEN
PASSAIC
ESSEX
HUDSON
UNION
STATEN ISLAND
BRONX
QUEENS
BROOKLYN
NASSAU
SUFFOLK
MONMOUTH
MIDDLESEX
LONG ISLAND SOUND
ATLANTIC OCEAN
LOWER BAY
RARITAN BAY
SANDY HOOK BAY
GREAT SOUTH BAY
EAST BAY
JONES INLET
JONES BEACH
FIRE ISLAND INLET
ISC
WATER CLASSIFICATION
CLASS "A"
CLASS "B-1"
CLASS "B-2"
WASTEWATER TREATMENT PLANTS
IN THE
INTERSTATE SANITATION DISTRICT
NEW YORK NEW JERSEY CONNECTICUT
SCALE IN MILES
0 1 2 4 6 8
1984

CONNECTICUT WATER POLLUTION CONTROL PLANTS

Bridgeport - East Side and West Side Plants, Connecticut (Fairfield County)

Completed Project

The $4 million Northwest interceptor is 100% complete.

Projects in Progress

A $361,000 SSES is 90% complete. The study is concentrating on tide gate infiltration and inflow.

Work is continuing on the lateral installation to the Trumbull interceptor. This $20 million project is 80% complete.

General modifications to both plants are in progress. Renovations at the East and West Side plants will cost approximately $1 million and $2 million, respectively.

New tide gates for both East and West drainage basins are to be installed shortly at a cost of approximately $411,000.

Preparations are being made to start a new 201 Facility Plan for both plants.

Fairfield, Connecticut (Fairfield County)

Completed Projects

An SSES is complete at a cost of $300,000.

Several rehabilitative projects have been completed with costs amounting to over $155,000. The following equipment was installed and is presently on-line: a mechanical aerator, two new secondary tanks and two new return activated sludge pumps.

Design work is 100% complete for the proposed pump station that will serve the north Fairfield area. No start-up date for construction has been determined.

Future Project

Additional modifications that are planned at this secondary facility will include the installation of two more secondary tanks.

Greenwich, Connecticut (Fairfield County)

Completed Project

The I/I Phase IIB study is 100% complete. A report will be issued shortly. The final costs incurred amounted to $300,000.

Future Project

Construction will start on the North Mianus sewer project in March 1985. The $6.5 million project is being funded by local and State funds.

Milford - Beaver Brook, Connecticut (New Haven County)

Project in Progress

Construction is about to begin on a $500,000 project focusing on upgrading of plant facilities. The new items that are to be installed include chlorination units, a belt filter press, an emergency generator building, sludge handling modifications and a scum decant facility.

Milford - Gulf Pond, Connecticut (New Haven County)

See Milford - Housatonic Wastewater Treatment Facility write-up.

Milford - Harbor, Connecticut (New Haven County)

See Milford - Housatonic Wastewater Treatment Facility write-up.

Milford - Housatonic Wastewater Treatment Facility, Connecticut (New Haven County)

Project in Progress

A reestimated cost of $16.6 million has been made for the construction of this secondary activated sludge facility. The project is approximately 30% complete.

Future Projects

A reestimate of $16.3 million has been made for construction of a collection system. The drainage basin to be served encompasses the three phased out plants -- Gulf Pond, Harbor and Town Meadows. These funds will provide for the installation of 19,000 feet of interceptor lines and 38,000 feet of force mains, the rehabilitation of four existing

pump stations, and the building of three new pump stations. A start-up date has been set for early 1985.

Milford - Town Meadows, Connecticut (New Haven County)

See Milford - Housatonic Wastewater Treatment Facility write-up.

New Haven - Boulevard, Connecticut (New Haven County)

Future Project

The Boulevard plant will be converted to a pump station. New units to be added to the station are bar screens and an aerated grit chamber. Extensive force mains will be installed in order to divert flows to the East Shore plant via the East Street pump station. An estimate of $8 million has been made for this work which also includes the removal of the original plant.

New Haven - East Shore, Connecticut (New Haven County)

Project in Progress

Twenty percent of the necessary modifications being made at this facility, in order to handle the eventual loadings from the Boulevard and East Street plants, are complete. The project includes rehabilitation of the pretreatment system, the grit removal phase, primary sludge storage and solids handling equipment. In addition, a belt filter press will be installed. An estimate of $7 million has been assessed for the entire job.

New Haven - East Street, Connecticut (New Haven County)

Project in Progress

This primary facility is being converted to a pump station and will convey flows to the East Shore plant. These flows represent the combined load from the East Street and Boulevard drainage basins. This $20 million project is 75% complete and includes force mains to the East Shore plant, a pretreatment system, an aerated grit chamber, bar screens and an odor control system. The cost estimate includes demolitation of the existing plant.

Norwalk, Connecticut (Fairfield County)

Completed Project

A sludge handling facility which uses sludge presses

and a reactor retrofit is 100% complete. Final costs incurred amounted to $2 million.

Projects in Progress

A combined sewer separation program is more than 45% complete. The final expenditure is expected to be $6 million which includes $4.5 million from the U.S. EPA Combined Sewer Separation Project grants and $1.5 million from City Sewer Project grants.

Replacement and/or upgrading of the main lift pumps is currently being studied. Approximately $300,000 has been allocated for this project.

The aeration and degritting systems are being evaluated for rehabilitation.

Stamford, Connecticut (Fairfield County)

Completed Project

A distributed baffle system study for the secondary clarifiers is 100% complete. The federal grant for this project amounted to $165,000.

Project in Progress

Construction of the Greenwich Avenue pump station is 30% complete. An estimated cost of $1 million has been made for this project.

Stratford, Connecticut (Fairfield County)

Completed Projects

Construction is 100% complete on the $1.4 million sludge dewatering facility.

The Broad Bridge pumping station upgrade has been completed. This $80,000 project included the installation of a third pump, a diesel generator, and the upgrading of the two existing pumps.

Project in Progress

Upgrading of Stratford's dewatering process is continuing. Installation of new belt filter presses is 95% complete. The cost for the equipment procurement and installation will be $400,000.

West Haven, Connecticut (New Haven County)

Projects in Progress

An SSES is still underway.

Work is 50% complete on several rehabilitative projects. New diffusers and a new lime silo and post lime addition facility are being installed.

Westport, Connecticut (Fairfield County)

Projects in Progress

An engineering study is underway to evaluate the facility, its equipment and a maintenance strategy.

Replacement of a detritor mechanism has just begun with an estimated cost of $100,000.

A reestimate of $1.2 million has been made for the upgrade and rehabilitation of Westport's sewer system. The project began last June and includes five new pump stations and the separation of storm and sanitary sewers. Removal of overflow gates on the west side of the Saugatuck River is also planned.

NEW JERSEY WATER POLLUTION CONTROL PLANTS

Atlantic Highlands, New Jersey (Monmouth County)

See Atlantic Highlands/Highlands Regional Sewerage Authority write-up.

Atlantic Highlands/Highlands Regional Sewerage Authority, New Jersey (Monmouth County)

Future Projects

The proposed Atlantic Highlands/Highlands Regional Sewerage Authority pump stations and 25,000 linear feet of force mains, which will convey flows to the Township of Middletown Sewerage Authority treatment facility, is expected to be complete in late 1986. Cost estimates have been placed at about $5.4 million for the entire regional system.

The Middletown plant, a secondary activated sludge facility, will be expanded to a design flow of 10.8 MGD to handle the additional flows from the communities of Atlantic Highlands and Highlands. New equipment on the agenda includes primary and secondary tanks, trickling filters, polymer feed, and a gravity thickener. Modifications to the aeration tanks and digesters will also be made. A cost estimate for all plant construction is $6 million.

Bayonne, New Jersey (Hudson County)

Completed Project

Ten new tide gates were installed in Bayonne's interceptor sewer system. This in-house project cost $50,000 for materials.

Project in Progress

A rehabilitation contract will be awarded shortly. The work entails the adjustment and cleaning of the sewer system regulators.

Future Project

Under the auspices of the HCUA, a revised 201 Facilities Plan is being conducted. A cost-effective analysis will weigh alternatives of upgrading and expansion to secondary treatment or regionalization. A proposed recipient of Bayonne's flows is the Port Richmond plant in New York

City. All plans are subject to change pending the 201 revisions.

Bayshore Regional Sewerage Authority, New Jersey (Monmouth County)

Completed Project

Keansburg, a member community of the Bayshore Regional network, has improved its sewer system by eliminating illegal connections and storm sewers. The project is 100% complete. The final costs for engineering and construction amounted to $11 million.

Carteret, New Jersey (Middlesex County)

Future Project

See the Woodbridge write-up.

Edgewater, New Jersey (Bergen County)

Project in Progress

A Step II 201 Facilities Design study is 90% complete. A cost of $1 million will be incurred for this project.

Future Projects

Rehabilitation of pump stations, regulators, and sewer lines is on the agenda with cost estimates of $1.6 million.

It is planned that this primary plant be upgraded to a 4 MGD secondary treatment facility utilizing rotating biological contactors. Among the new units to be installed are an influent pumping station, grit collectors, high rate clarifiers, rotating biological contactors, a secondary tank, and a chlorine contact tank. Sludge disposal will be handled by the regional plant in Parsippany - Troy Hills. A cost of $10 million has been estimated for the project.

Highlands, New Jersey (Monmouth County)

See Atlantic Highlands/Highlands Regional Sewerage Authority write-up.

Hoboken, New Jersey (Hudson County)

Future Project

Hoboken is located in Area III of the HCUA's drainage

basin system. Several alternatives for the outcome of this facility are being studied in a revised 201 Facilities Plan that is being conducted by the HCUA. One alternative is for Hoboken to remain a primary plant and divert flows to a secondary facility in West New York. Another plan calls for expanding and upgrading to secondary treatment and treating diverted flows from West New York and Woodcliff - North Bergen. All plans are subject to change pending the 201 revisions.

Jersey City - East, New Jersey (Hudson County)

Completed Project

A CSO study has been completed and includes the Jersey City - West drainage area.

Project in Progress

Tide gate and regulator rehabilitation is 46% complete. This $1.2 million project includes work for the Jersey City - West plant.

Future Project

Jersey City - East is located in Drainage Area I of the HCUA. Several alternatives are being outlined in a revised 201 Facilities Plan to determine this facility's future service. One alternative is to expand and upgrade to a 57.5 MGD secondary activated sludge plant. New equipment that would be needed includes an aeration tank, secondary clarifiers, a chlorine contact tank and sludge handling facilities. Another alternative is to convert to a pump station and convey flows to the PVSC treatment plant via Jersey City - West. All plans are subject to change pending the 201 revisions.

Jersey City - West, New Jersey (Hudson County)

Completed Project

See the Jersey City - East write-up.

Project in Progress

See the Jersey City - East write-up.

Future Project

Under the auspices of the HCUA and in Drainage Area I, a 201 Facilites Plan is being revised to determine this

plant's future. The alternatives include upgrading to secondary treatment or conversion to a pump station. In a pump station status, the flows could be diverted to the PVSC or Jersey City - East treatment plants. All plans are subject to change pending the 201 revisions.

Joint Meeting of Essex and Union Counties, New Jersey (Union County)

Completed Projects

The I/I Phase IIB 201 study is complete and a report has been issued. A cost of approximately $1.8 million was incurred.

Construction has been completed on the facility's powerhouse. The powerhouse came on-line during June 1984 and is currently providing 30% of the facility's electrical requirements. The electricity is generated from digester gas.

Future Project

Presently, Joint Meeting of Essex and Union Counties is using the 12-mile ocean sludge dump site for disposal. Due to policy and economics, land-based alternatives versus continued ocean disposal are being considered by federal and State authorities. A land-based alternative could be a sludge dewatering facility followed by incineration. Due to the lengthy process to obtain an incinerator permit, a permit of this nature is maintained in the eventuality that an incineration alternative is chosen. Cost analysis studies will be pursued.

Kearny, New Jersey (Hudson County)

Project in Progress

Design work for construction of new pump stations and force mains is underway. The permit process for the different design and construction phases of the project will be completed in early 1985. Flows will be diverted to the PVSC facility; a cost of approximately $5.7 million has been estimated for the project.

Kearny is located in Drainage Area I of the HCUA.

Linden Roselle Sewerage Authority, New Jersey (Union County)

Projects in Progress

A sludge management plan has been segmented into two parts -- intermediate and long-term. The intermediate plan consists of dewatering and landfilling. No date has been set for land disposal operations. See the "Future Projects" section for the sludge management long-term phase.

A permanent sludge disposal study is still underway.

Future Projects

The permanent sludge disposal plan consists of dewatering and co-disposal of the sludge by incineration with garbage. This is a joint venture with the Rahway Valley Sewerage Authority. The cost for the plan is estimated to be $14 million of which Linden Roselle is committing 40%.

A $10 million proposal is awaiting federal funding. The project will eliminate bypass discharges from a pump station and a tide gate. Plans call for construction of 20,000 linear feet of gravity flow relief sewers in Linden.

Middlesex County Utilities Authority, New Jersey (Middlesex County)

Future Projects

The Old Bridge Township Sewerage Authority, Sayreville (Morgan and Melrose), and South Amboy are expected to join the MCUA system by 1987.

See the Woodbridge write-up for additional information.

Old Bridge Township Sewerage Authority, New Jersey (Middlesex County)

Future Project

The abandonment of this facility is anticipated for late 1987. The plant will be converted to a pump station with force mains connected to the regional secondary treatment facility operated by the MCUA.

Passaic Valley Sewerage Commissioners, New Jersey (Essex County)

Project in Progress

Seventy-five percent of the construction of the primary clarifiers has been completed. This $74 million project is expected to be complete in early 1986.

Future Projects

North Haledon, in northwestern Essex County, will eventually direct all flows to the Passaic Valley facility. No construction date has been determined.

A $7.6 million grant has been awarded under the Marine Combined Sewer Overflow Correction Program. The federally-financed project involves the reconstruction of six regulator chambers in Paterson to swirl type structures.

A sludge incinerator employing a fluidized bed is PVSC's alternative for sludge disposal. Costs and construction dates have not yet been prepared.

Perth Amboy, New Jersey (Middlesex County)

Projects in Progress

The Step II 201 Facilities Plan is being held up due to funding problems.

Construction is 80% complete at this primary plant. A cost of $75,000 is being incurred for a flowmeter system, chlorinators and a diffuser.

Future Projects

An estimate of $174,000 has been made for building repairs including brick work, window and door replacement, and shower repairs. Replacement of wooden floors, railings on a clarifier and a sludge dump yard are also on the agenda.

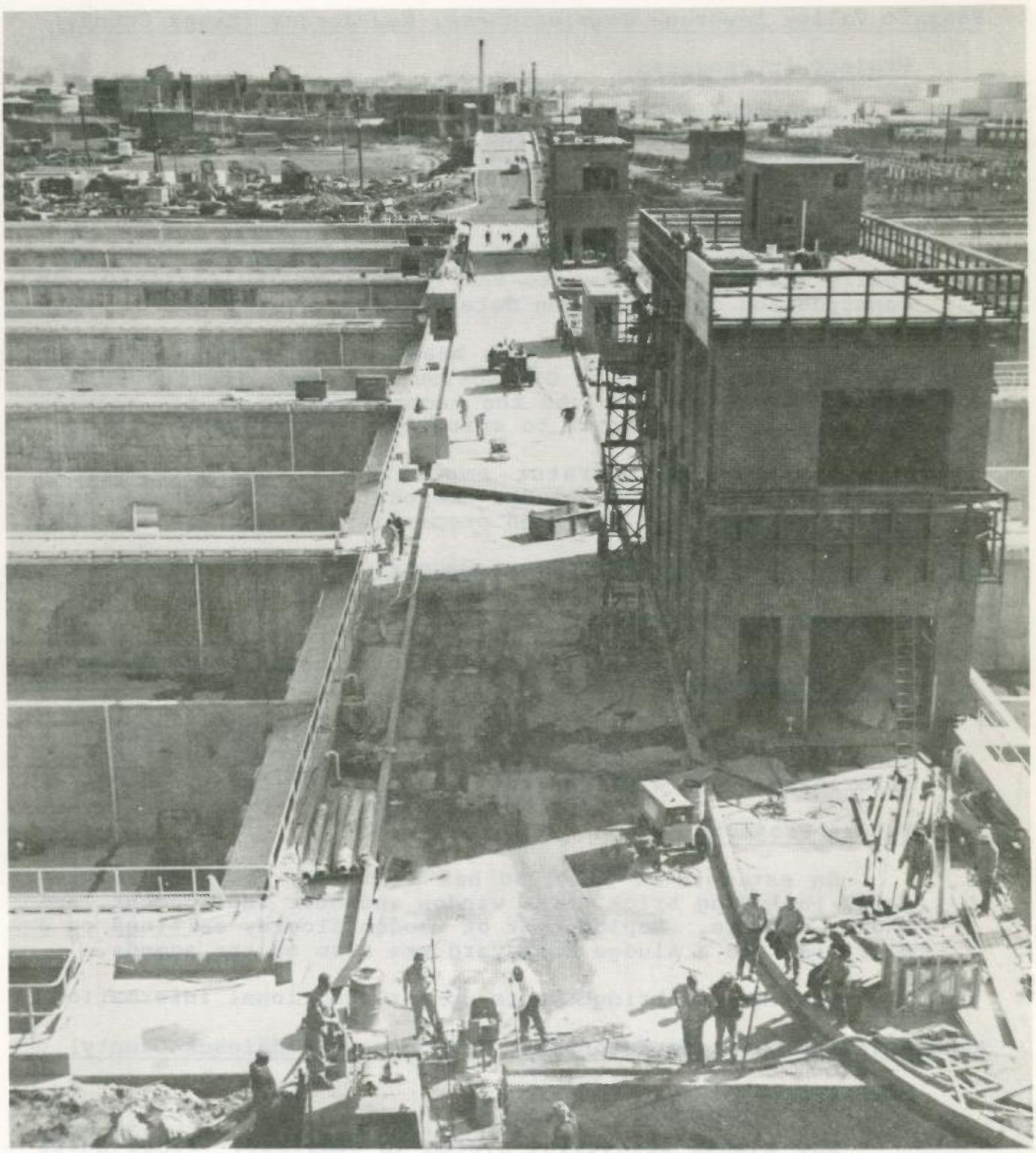
See the Woodbridge write-up for additional information.

Rahway Valley Sewerage Authority, New Jersey (Middlesex County)

Completed Projects

The sludge dewatering system is complete. Final costs incurred amounted to $7.5 million.

All construction work on the grit handling facilities



Primary Clarifier Tanks and Dehumidification Building Under Construction at P.V.S.C., Essex County, New Jersey.
Photo Courtesy of Charles Manganaro, Consulting Engineers.

is complete at a total cost of $484,000.

Projects in Progress

Fifteen existing flowmeter systems are being rehabilitated and updated. The work is 95% complete and is expected to cost $910,000.

A laboratory expansion project is 12% complete. The cost estimate for this project is $218,800.

Future Projects

See the Linden Roselle Sewerage Authority write-up.

Sayreville - Melrose and Morgan Plants, New Jersey (Middlesex County)

Project in Progress

A 201 Facilities Plan supplement is underway to design a pump station conversion.

Future Project

It is planned that these plants be abandoned and converted to pump stations. The wastewater flows are to be diverted to the MCUA treatment plant in 1987.

South Amboy, New Jersey (Middlesex County)

See the Middlesex County Utilities Authority write-up.

West New York, New Jersey (Hudson County)

Project in Progress

An engineering study is underway to evaluate a construction site for a new secondary facility.

Future Project

An estimated $10 to $15 million will be needed to upgrade this plant to secondary treatment. The treatment process will incorporate trickling filters or biological contact discs. Additional equipment needed includes two primary tanks, two sludge thickeners, a holding tank, and sludge handling facilities. This upgrading alternative is being studied in a revised 201 Facilities Plan for HCUA's Drainage Area III. With this secondary status, possible additional flows from Woodcliff - North Bergen and Hoboken

would be treated in West New York. Another alternative for West New York is to convey flows to Hoboken for secondary treatment. All plans are subject to change pending the 201 revisions.

Woodbridge, New Jersey (Middlesex County)

Future Project

Two alternatives are being assessed for the Woodbridge facility. Construction estimates of over $6 million have been made to upgrade and expand this primary facility. Under this plan, flows from Carteret and Perth Amboy would be treated here. Another plan would be for Woodbridge to act as a pump and relay station for its own flow, as well as those from Carteret and Perth Amboy. The combined flow would be treated by the MCUA facility.

Woodcliff - North Bergen, New Jersey (Hudson County)

See the Hoboken and West New York write-ups.

NEW YORK WATER POLLUTION CONTROL PLANTS

Arthur Kill Correctional Facility, New York (Richmond County)

Future Project

Problems with peak flows are to be alleviated by installing surge tanks. An estimate of $400,000 has been made to incorporate four tanks and accompanying equipment into the existing plant. No start-up date for the project has been made.

Bay Park Sewage Treatment Plant - Disposal District No. 2, New York (Nassau County)

Projects in Progress

An engineering feasibility study for an ocean outfall and route selection is 95% complete.

An I/I study is underway.

Phase I construction is 25% complete at this 60 MGD secondary facility. A reestimate of $22 million has been made to install five aerobic fluidized bed reactors and two final clarifiers.

Future Projects

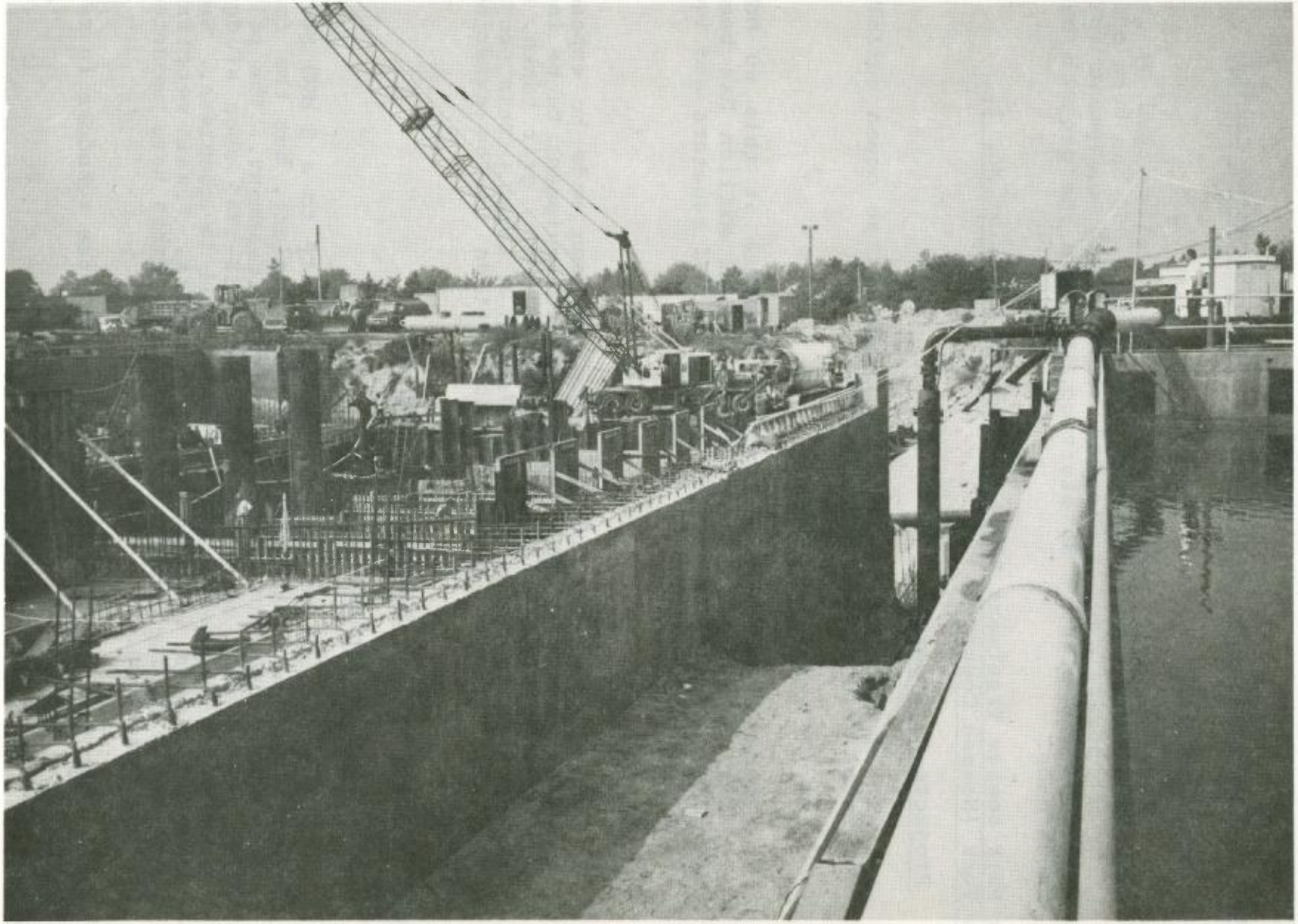
An estimate of $102 million has been made to expand this facility to 70 MGD. Among the new equipment to be incorporated into this system are bar screens, grit tanks, a primary tank, an aeration tank, and final tanks. This project also includes general rehabilitation to the existing plant.

Blind Brook, New York (Westchester County)

Projects in Progress

Construction to upgrade this facility to a 5 MGD secondary activated sludge plant is 99% complete, but the facility is still providing only primary treatment. The primary status will be maintained until mid-1985 when sludge handling facilities at Port Chester will be complete. New secondary units include aeration tanks, final settling tanks, and sludge handling facilities. Costs have amounted to $12.3 million.

This facility is meeting the compliance schedule in re-



Fluidized Beds and Final Settling Tank Construction, Bay Park Sewage Treatment Plant, Nassau County, New York. Photo Courtesy of County of Nassau, D.P.W.

sponse to federal and State consent orders to attain secondary treatment.

See the Port Chester write-up for further information on projects in progress.

Bowery Bay, New York (Queens County)

Projects in Progress

An I/I study is still underway.

A plan of study has been submitted for approval to correct some plant operational deficiencies.

The remainder of this section applies to all New York City wastewater treatment facilities.

The City has contracted with a consultant to study the existing sewer regulator system and develop a Regulator Improvement Program. This study inventoried the existing regulators; determined tributary areas and flows; and included the inspection of the mechanical and structural integrity of regulator and diversion chambers, tide gate chambers, and intercepting sewers and outfalls in all five boroughs. This study is nearing completion and the consultant is analyzing this information to make recommendations for the improvement of operation and maintenance of the system.

The City of New York has a pretreatment program and sewer use laws and regulations administered by the Industrial Waste Control Section of the Department of Environmental Protection. Federal regulations require that New York City study new federal pretreatment requirements and make any needed changes to existing sewer use laws, regulations, and enforcement procedures. The City has contracted with a consultant to develop a pretreatment program which meets all federal and State requirements. This project will evaluate current and proposed federal and State pretreatment requirements in light of actual industrial discharges, existing City sewer use laws and regulations, and current NYC DEP monitoring and enforcement programs for industrial wastewaters. Pollutants received by the City's water pollution control plants have been identified and quantified by means of sampling and laboratory analysis. This data, along with other available information, has been used to develop changes in the City's sewer use laws and regulations.

A combined sewer overflow study is about to get under way to identify and assess the combined sewer overflows which result in contravention of water quality standards. A

plan for an abatement program to eliminate those contraventions by reducing CSO discharges will be put into operation. This study and abatement program is being conducted in accordance with SPDES requirements for each of the 14 facility planning areas in New York City.

Future Project

It is proposed that this secondary activated sludge facility undergo rehabilitation. The cost of this project is estimated at $11.5 million.

Camp Smith, New York (Westchester County)

Completed Project

A $10,000 expenditure was made to rehabilitate a trickling filter at this 0.24 MGD secondary facility.

Project in Progress

Rehabilitation of the chlorinators is 90% complete. This project will cost between $5,000 and $6,000.

Cedar Creek Water Pollution Control Plant - Disposal District No. 3, New York (Nassau County)

Completed Project

The Step II 201 Facilities Plan Design is complete and a report has been issued.

Project in Progress

Work is 95% complete on taking the advanced wastewater facility out of service and returning the units to the primary and secondary phases of the treatment operation. Improvements are being made to the odor control system. Installation of the polymer feed system is nearly complete. This system will be used for thickening in the flotation process and to enhance settling in the final clarifiers. An estimate of $2 million has been made for the work.

Future Project

It is estimated to cost $120 million to expand this facility to 76 MGD. Among the new equipment to be installed are bar screen units, grit tanks, primary tanks, aeration tanks, final clarifiers, digesters and flotation tanks.

Coney Island, New York (Kings County)

Projects in Progress

Construction is underway on an upgraded plant designed to provide 90% removals of BOD and suspended solids. Construction grants have been approved for the first four phases. Work is 14% complete on the primary tanks, the pump and powerhouse, and the sludge force main contracts. Emergency rehabilitation work has been approved for the purchase and installation of an engine generator and auxiliaries. These construction phases have an estimated cost of $191 million.

See the Bowery Bay write-up for other projects in progress.

Future Projects

An application has been submitted for the remaining four phases of construction.

The reestimated cost for adding aeration and final settling tanks, thickeners, main pumps, and process blowers is $318 million.

A recently approved contract provides for the construction of the plant maintenance and grit removal facilities. A start-up date has not been announced.

Great Neck Water Pollution Control District, New York (Nassau County)

Future Projects

Plant expansion plans include new headworks, primary and final settling tanks, a 90-foot diameter trickling filter, digester gas storage tanks, and a chlorine contact tank. Replacement of 7900 linear feet of sewers and rehabilitation of three pumping stations was also recommended in the 201 Facilities Plan study. The start-up date is early 1986 at an estimated cost of $13 million.

Great Neck Village Water Pollution Control Plant, New York (Nassau County)

Completed Project

A sodium hydroxide scrubber has been installed at a total cost of $50,000. The scrubber removes odors generated in the covered grit chamber and primary settling tank units.

Huntington Sewer District, New York (Suffolk County)

Completed Project

The Phase II 201 Facilities Design Plan study is complete and a report has been issued.

Future Projects

An $8.9 million construction upgrade is to commence in the spring of 1985. A scavenger waste pretreatment process will be incorporated into the system which will include a bar rack, grit chamber, equalization tanks, flash mix and flocculation tanks, a primary settling tank, bio disc, a secondary settling tank, and capacity for chemical storage.

An additional 4400 feet of gravity sewers will be installed adjacent to the existing sewered area. This phase of construction is estimated to cost $666,500.

Hunts Point, New York (Bronx County)

Completed Projects

Remedial corrections have been made by New York City plant personnel that have enabled this plant to operate in the step aeration mode.

An existing City Island force main was extended 350 feet in order to alleviate odor problems caused by poor gravity flow. The final cost amounted to over $86,000.

Projects in Progress

An I/I study is underway.

See the Bowery Bay write-up for other projects in progress.

Future Projects

A plan of study to correct plant deficiencies and improve reliability has been submitted for approval.

Rehabilitative construction is planned for various operating units in conjunction with the replacement of the final settling tanks. The cost estimate for this work is $23 million.

Inwood Water Pollution Control Plant - Disposal District No. 1, New York (Nassau County)

Completed Projects

A 201 Facilities Plan study has been completed. The issued report details the plant's condition and recommends improvement alternatives.

The rehabilitation and replacement of covers on the digesters are 99% complete. In addition, a new digester gas system and three new sludge pumps were installed. The reestimated cost for all construction is $1.5 million.

Jamaica, New York (Queens County)

Projects in Progress

New York City is studying the possible presence of residual compounds in Jamaica Bay with respect to potential biological, recreational, and public health effects. The study will attempt to produce a statistical data base on the concentration and distribution of residual chlorine in Jamaica Bay and will assess the impact on the biology of the Bay.

See the Bowery Bay write-up for other projects in progress.

Joint Regional Sewerage Board - Town of Haverstraw, New York (Rockland County)

Completed Project

An industrial pretreatment analysis study is complete and a report has been issued.

Projects in Progress

See the Stony Point write-up.

Jones Beach Water Pollution Control Plant, New York (Nassau County)

Project in Progress

Rehabilitation continues on the sludge drying beds, primary and secondary settling tanks, and trickling filter. Among the equipment being replaced are two comminutors, greenhouse sludge valves and all methane gas lines. This entire project is approximately 95% complete and will cost

an estimated $578,000.

Long Beach Water Pollution Control Plant, New York (Nassau County)

Project in Progress

A revised 201 Facilities study is more than 70% complete. The revision of the Nassau County 201 Facilites Plan emphasizes a more detailed analysis of the barrier beach communities which include Long Beach, West Long Beach and Point Lookout.

Metro-North Commuter Railroad (Harmon Shop), New York (Westchester County)

Project in Progress

The upgrading of this facility is 95% complete. This $1.47 million project increases the design flow to 0.4 MGD and incorporates an activated carbon column. A final construction date of January 1985 is estimated.

New Rochelle, New York (Westchester County)

Project in Progress

Twenty-five percent of a $1.2 million plant upgrading is complete. The work entails the conversion of the sludge dewatering process; coil filters are being replaced by belt filter presses.

Newtown Creek, New York (Kings County)

Completed Project

Modifications to the Manhattan pump station to conserve energy and eliminate excessive heat are essentially complete at a cost of $1.9 million.

Projects in Progress

See the Bowery Bay write-up for projects in progress.

Future Project

A Facilities Plan recommends methods for upgrading the existing plant.

Northport Wastewater Treatment Plant, New York (Suffolk County)

Completed Projects

An energy conservation study was completed at a cost of $5,000. The study's findings called for the implementation of smaller influent pumps. Construction entailing the rehabilitation of the influent chamber and the installation of smaller pumps and accompanying equipment has been completed at a cost of $8,000.

Project in Progress

An engineering study investigating the needs of this facility for future expansion is 25% complete.

North River, New York (New York County)

Projects in Progress

The Step II design work for the plant superstructure and the rooftop park are in progress at an estimated cost of $24.8 million.

Construction is 40% complete on the main building, preliminary tanks, sludge facilities, interim facilities, plumbing, HVAC, and electrical contracts. The total reestimated cost is approximately $297.6 million.

It is estimated that this plant will provide advanced preliminary treatment (screening, grit removal, settling, disinfection and sludge removal) by March 31, 1986 and secondary treatment by July 1, 1989.

See the Bowery Bay write-up for other projects in progress.

Future Project

The remainder of the plant superstructure and rooftop park are under design and a grant application has been submitted for secondary treatment phases I, II and III at a total cost of $200 million.

Oakwood Beach, New York (Richmond County)

Completed Project

The Fresh Kills interceptors are complete at a cost of $18 million.

Projects in Progress

The consultant design contract for the Mayflower pumping station is in progress.

The facility plan for the West Branch interceptor system is still in preparation.

Design work for the force main from the Eltingville pump station is underway.

A new I/I study for the entire drainage area is underway.

Construction of a section of the West Branch interceptor has started at a cost of $2.7 million.

Work is progressing on the remainder of the Eltingville and Richmond Hill Road pumping station at a cost of $19.8 million.

See the Bowery Bay write-up for other projects in progress.

Future Project

The final design of the West Branch interceptor system to Tottenville, which will complete the Oakwood Beach WPCP project, is awaiting completion of the final facility plan to determine routing and method of construction.

Orange & Rockland Utilities, New York (Rockland County)

Completed Projects

A new 0.12 MGD secondary activated sludge facility is 100% complete. This package plant is totally enclosed in a new building. Presently, the plant is treating all flows from the service building which houses the administrative offices, laboratory, and warehouse.

Project in Progress

Design work is 80% complete on a combination of two projects. The plan encompasses a reconversion of two major units to coal. A sewage plant upgrade includes two new lift stations and modification of the existing lift station.

Future Project

Construction is anticipated to take two years for

Orange and Rockland Utilities' reconversion and sewage treatment plant upgrade. As of this writing, the NYS DEC has approved the design work; the U. S. EPA has yet to reply. Estimated costs for the construction are $120 million.

Orangetown Sewer District, New York (Rockland County)

Completed Projects

Engineering studies involving industrial pretreatment are complete.

A 201 Facilities Plan study, which addressed plant modification alternatives, is complete.

Future Project

An estimated cost of $350,000 was made for rehabilitation of the sludge handling facilities. A belt dewatering process will be utilized for treatment and energy conservation.

Owls Head, New York (Kings County)

Projects in Progress

Based upon the results of the I/I study and the Step I 201 Facilities Plan, an upgraded plant has been designed to provide 90% removals of BOD and suspended solids. Plans and specifications have been prepared. Construction grants have been approved for the first four phases. Construction is 14% complete on the sludge processing complex, the pump and powerhouse, primary treatment and dechlorination facilities, and demolition of the aeration tank building superstructure. Emergency rehabilitation work has been approved and begun for the purchase and installation of an engine generator and auxiliaries. Final costs have been reestimated at $155 million.

See the Bowery Bay write-up for other projects in progress.

Future Projects

An application has been submitted for aid for the remaining four phases of construction at a cost of $256 million.

An estimate of $365 million has been made to upgrade this modified activated sludge plant utilizing a high rate process to a step aeration facility with a design flow of

120 MGD.

Oyster Bay Sewer District, New York (Nassau County)

Completed Projects

Several reports have been completed in preparation for a facility upgrade to utilize biological rotating discs and increase plant capacity to 1.4 MGD.

An I/I Phase IIB 201 Facilities Design study and an engineering and environmental data report were completed and reports were issued.

Future Project

It is proposed to upgrade this facility to utilize biological rotating discs. New equipment to be installed include bio discs, secondary tanks, a belt press and digesters. An estimated cost of $2.3 million has been made.

Peekskill, New York (Westchester County)

Future Project

Rehabilitative work will start shortly at this secondary activated sludge facility. Approximately $230,000 will be needed to replace one small process air blower (125 HP) and to repair an existing 400 HP process air blower.

Port Chester, New York (Westchester County)

Completed Project

A predesign report is complete. It incorporated recommendations of previous engineering reports into the current redesign for secondary treatment.

Projects in Progress

Construction of an interim sludge handling facility, which will serve both Blind Brook and Port Chester, is 5% complete. This centrigue facility will thicken primary and secondary sludges from Port Chester. An estimate of $2 million has been made for this project.

A reestimate of $936,000 has been made for sewer rehabilitation work. Construction is 10% complete.

Future Project

This primary facility is meeting the compliance schedule, in response to federal and State consent orders, to attain secondary treatment. Construction costs have been estimated at over $32 million to incorporate rotating biological contactors. Additional equipment on the agenda includes final settling tanks, waste sludge gravity thickening, dewatering, and ultimate disposal (fluid bed furnaces) facilities.

Port Richmond, New York (Richmond County)

Projects in Progress

See the Bowery Bay write-up for projects in progress.

Port Washington Water Pollution Control District, New York (Nassau County)

Future Projects

No start-up date has been given for this facility's $22 million upgrade and expansion to 4 MGD. Among the new units to be installed are primary and final settling tanks, recirculation pumps, primary sludge pumps, Parshall flume instrumentation, a spare sludge disintegrator, a spare fluidizing blower, chlorine contact tanks, headworks, and one trickling filter. A new sodium hypochorite system and an odor control system for the dewatering building will be incorporated into this facility. Miscellaneous items on the construction agenda include electrical, heating and ventilation, plumbing, concrete repairs, changing of trickling filter media and under drains, modifications to the ash storage tank, and the demolition of the existing headworks and gas chlorine system. The sewer system work will include the installation of one new pump station, rehabilitation of two existing pump stations, elimination of I/I, and replacement of undersized pipes.

Red Hook, New York (Kings County)

Completed Projects

A Step I 201 Facilities Plan for the Gowanus pumping station and a water quality study for the Gowanus Canal have been completed at a cost of approximately $1.9 million.

Step II, final design of the superstructure, was completed.

Projects in Progress

Seventy-eight percent of the new interceptor sewer system is complete. This system will intercept and transmit the local dry weather flow to the treatment plant. A cost estimate of $106.4 million has been made.

Ongoing construction contracts involving structures and equipment (main building), plumbing, HVAC, electrical and sludge facilities are 10% complete. A total cost estimate for these contracts amounts to $105.5 million.

It is estimated that this plant will provide advanced preliminary treatment (screening, grit removal, settling, disinfection and sludge removal) by April 1, 1987 and secondary treatment by June 1, 1989.

See the Bowery Bay write-up for other projects in progress.

Future Projects

Future construction includes contracts for the interceptor ($2.6 million), secondary treatment ($65.5 million), force mains ($13.4 million), and Gowanus pump station and related water quality studies ($21.2 million).

Richmond Memorial Hospital, New York (Richmond County)

Projects in Progress

A new secondary activated sludge facility is 97% complete and will be on-line early in 1985. The plant, which has a design flow of 0.025 to 0.04 MGD, was built adjacent to the hospital. The building site was attained specifically for this project and cost $12,000.

The original structure has been completely dismantled and the septic tanks will be sand filled.

Final costs for all construction amount to over $250,000.

Rockaway, New York (Queens County)

Completed Project

A new small size blower was installed to improve present energy efficiency.

Projects in Progress

See the Bowery Bay write-up for projects in progress.

Rockland County Sewer District #1, New York (Rockland County)

Project in Progress

Upgrading and expansion of this facility are 5% complete. This plant will have a design flow of 25 MGD and will incorporate rotating biological contactors. An estimate of $70 million has been made to cover installation of an aerated grit chamber, primary and secondary clarifiers, RBC units, sludge concentrators, high rate digesters, a composition facility and related structures.

Future Project

A $34 million sewer system expansion program will be implemented to complete the facility's upgrading and expansion. The plan includes installation of interceptor sewers to service unsewered areas.

Roslyn, New York (Nassau County)

Project in Progress

This secondary facility is being phased out. Presently, 9,700 linear feet of force mains and gravity sewers are being installed in order to divert flows to the Nassau County Disposal District No. 3 - Cedar Creek facility. This project is 90% complete and the estimated cost is $1.1 million.

Future Project

This secondary facility is to be converted to a pump station in order to convey flows to the Nassau County sewer system and be treated by the Cedar Creek plant. A start-up date for construction is anticipated in the spring of 1985 and the estimated cost is $2.5 million.

Stony Point, New York (Rockland County)

Projects in Progress

Expansion construction is continuing at this secondary activated sludge plant. Ninety-eight percent of this $1 million project is complete. A digester, a chlorine contact chamber, and a sludge belt press are being installed.

Stony Point's sewer system is being modified with a new pump station and force main. All flows in excess of 1 MGD will be pumped to the Joint Regional Sewerage Board in Haverstraw. This project, which is 98% complete, has a reestimated cost of $500,000.

Suffolk County Sewer District #1, Port Jefferson, New York (Suffolk County)

Completed Project

The installation of approximately 1.5 miles of force main has recently been completed at a cost of approximately $2 million.

Future Projects

Construction upgrading has been estimated at $3.1 million. This primary plant will be converted to a secondary activated sludge facility with a design flow of 0.75 MGD. This flow represents Port Jefferson's flow only. New units on the agenda include primary and secondary settling tanks, disinfection facilities, and rotating biological contactors.

A cost estimate of $1.2 million has been made for pump station design and installation. A start-up date has not been determined.

Suffolk County Sewer District #1, S.U.N.Y., New York (Suffolk County)

Future Project

It is proposed that this plant be upgraded to a design flow of 2 MGD which will use advanced secondary treatment. The treated flow represents the college's load only. The plant will incorporate an oxidation ditch for BOD and nitrogen removals. New units that will be installed include rotating screens, settling tanks, a disinfection system and a harbor outfall. Final expenditures have been reestimated at $10.4 million.

Suffolk County Sewer District #6, Kings Park, New York (Suffolk County)

Project in Progress

An in-house engineering study to determine improvement alternatives for sludge handling and plant safety modifications is in the design phase. Cost estimates and completion dates are not presently available. A consulting engineer

selection phase will soon follow in order to implement the desired plan.

Tallman Island, New York (Queens County)

Projects in Progress

An I/I study is still underway.

See the Bowery Bay write-up for other projects in progress.

26th Ward, New York (Kings County)

Projects in Progress

See the Bowery Bay write-up for projects in progress.

Wards Island, New York (New York County)

Projects in Progress

A consultant has been selected and is performing an I/I study on this facility.

See the Bowery Bay write-up for other projects in progress.

West Long Beach Sewer District, New York (Nassau County)

Projects in Progress

Replacement of existing digester equipment, an emergency generator, an influent lift station, treatment plant pumps and a new chlorine contact tank are currently 50% complete. The estimated cost of this construction and rehabilitation is $2.915 million.

Improvements to the three pumping stations in the system are underway. This phase of the modernization is 50% complete and is estimated to cost $870,000.

Yonkers Joint Treatment Plant, New York (Westchester County)

Completed Project

An I/I study is complete and a report will be issued shortly.

Project in Progress

The combined sewer overflow study is still in progress.

EFFLUENT AND AMBIENT WATER QUALITY MONITORING

This year the Commission continued its programs for sampling effluents and the ambient waters in its District. Funding was not available to reinstate the operation of the remote automatic water quality monitors. The remote units remain on standby and, if warranted, can be manually operated. They also can be restored to automatic operation with minimal effort when funds become available.

On a regular basis, the Commission sampled the effluents of publicly-owned, privately-owned and industrial wastewater treatment plants discharging into District waters. A helicopter is utilized to conduct sampling surveys of the waters of the District. The samplings are performed by the Commission's field personnel and the Interstate Sanitation Commission laboratory conducts the analyses. The data and reports are furnished to the appropriate federal, state, and municipal agencies as both printed copy and computer input.

The Interstate Sanitation Commission laboratory maintained its permanent New Jersey wastewater laboratory certification. It has also applied to the New York State Department of Health for certification under that agency's newly enacted program. The laboratory continued to participate in the U. S. Environmental Protection Agency Water Pollution Laboratory Evaluation Program and the U. S. Environmental Protection Agency Water Supply Microbiology Performance Evaluation Study. The U. S. Food and Drug Administration (FDA) inspected the Interstate Sanitation Commission laboratory and found conformance with the recommended procedures.

A continued deficiency exists in the laboratory -- the lack of a gas chromatograph/mass spectrophotometer (GC/MS). The addition of this piece of equipment would greatly expand the Commission's capability to monitor for toxic substances.

Effluent Monitoring

In order to ascertain whether the Commission's regulations and N/SPDES permit requirements are being met, samples are collected at publicly-owned and privately-owned wastewater treatment plants and at a limited number of industries which discharge into District waters. Six hour samples are collected at the wastewater treatment plants and some industries. Twenty-four hour samples (or samples over a full day's production if less than 24 hours) are taken in the case of industrial sampling for N/SPDES permit requirements. The industrial samples are analyzed for a wide range of parameters, with the specific parameters being dependent on the permit specifications. Many of the industries are sampled at the request of, and in cooperation with, the Commis-

sion's member states and the U. S. Environmental Protection Agency.

Ambient Water Quality Monitoring

Water quality surveys in the District were scheduled for March, July, August, and September. Due to helicopter unavailability, some runs were canceled. Conducting the surveys by helicopter enables a large survey area to be sampled during a portion of a single phase of a tidal cycle. The samples are returned to the Commission laboratory and analyzed within the prescribed holding times. In addition to the conventional pollutant parameters, samples were taken for nutrients, heavy metals, oil and grease, and toxic organics. These data are available at the Commission and through STORET.

Twenty water column samples from District waters were analyzed for twenty organic pollutants. The results of these analyses are shown on the following table.

A map of the water quality sampling areas and lists of the sampling station descriptions are also shown on the following pages.

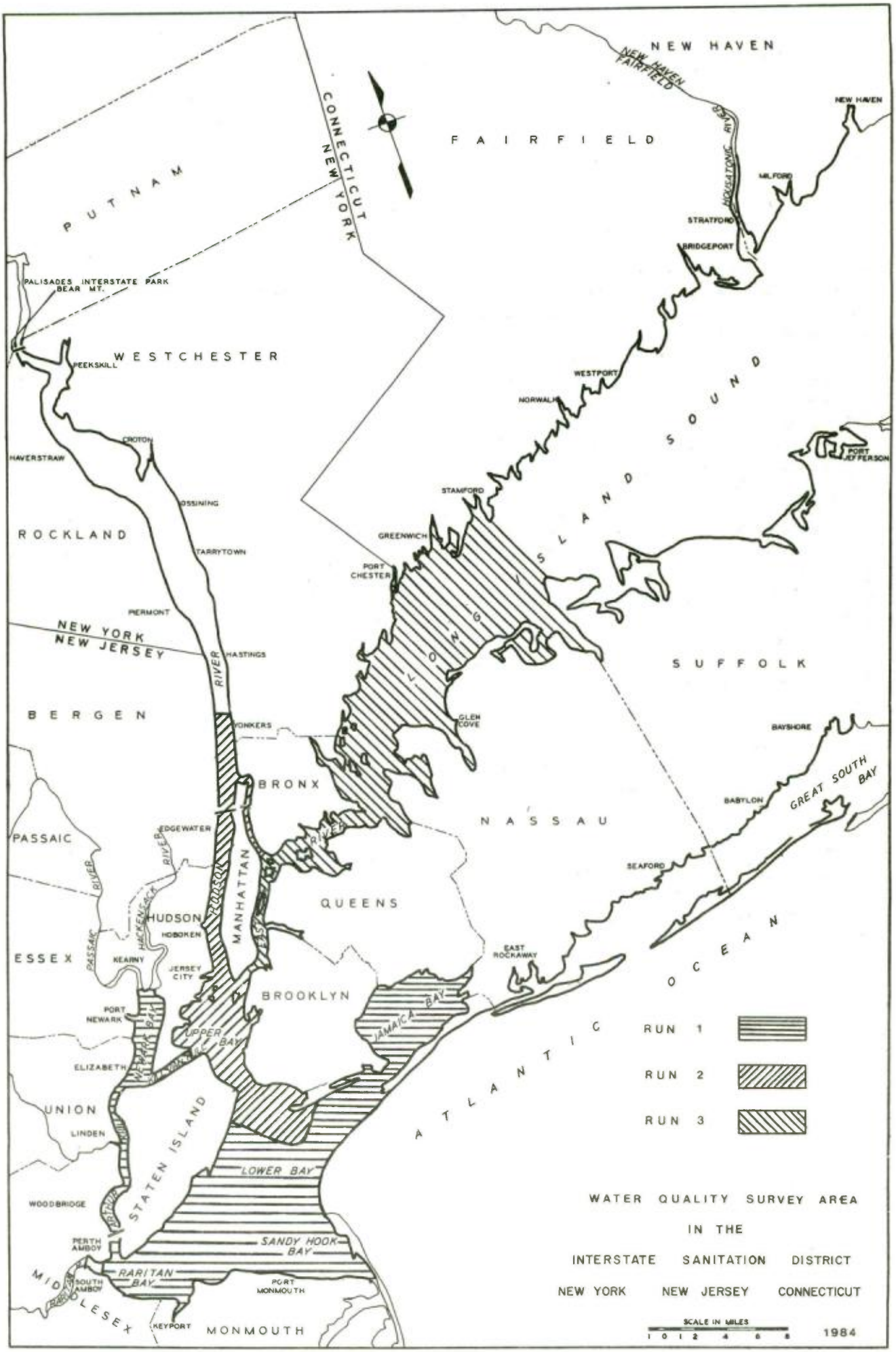
SELECTED ORGANIC COMPOUNDS DETECTED IN

INTERSTATE SANITATION DISTRICT WATERS

DURING 1984*

STATION	COMPOUND	DETECTED CONCENTRATION (µg/l)
HA-02	alpha - BHC	0.004
JB-07	Dioctyl phthalate	26.0
RI-03	Dioctyl phthalate	20.5
HR-03	Dioctyl phthalate	5.32
HR-04	Dioctyl phthalate	19.9
HR-05	Dioctyl phthalate	6.54
LB-04	Dioctyl phthalate	73.7
LI-28	Dioctyl phthalate	31.6
LI-29	Dioctyl phthalate	63.1
LI-31	Dioctyl phthalate	7.58
LI-35	Dioctyl phthalate	39.2

* U. S. EPA Priority Pollutants analyzed for: alpha - BHC; beta - BHC; Lindane; Heptachlor, Heptachlor Epoxide; Aldrin; Endrin; Chlordane; Dieldrin; Endosulfans; p,p' - DDE; o,p' - DDE; p,p' - DDD; o,p' - DDD; p,p' - DDT; o,p' - DDT; PCBs; Methoxychlor; Mirex; and Dioctyl phthalate.


NEW HAVEN
NEW HAVEN
FAIRFIELD
FAIRFIELD
NEW HAVEN
HOUSATONIC RIVER
MILFORD
STRATFORD
BRIDGEPORT
CONNECTICUT
NEW YORK
PUTNAM
PALISADES INTERSTATE PARK
BEAR MT.
WESTCHESTER
PEEKSKILL
WESTPORT
NORWALK
LONG ISLAND SOUND
PORT JEFFERSON
CROTON
HAVERSTRAW
STAMFORD
OSSINING
ROCKLAND
GREENWICH
TARRYTOWN
PORT CHESTER
PIERMONT
NEW YORK
NEW JERSEY
HASTINGS
RIVER
SUFFOLK
BERGEN
YONKERS
GLEN COVE
BAYSHORE
BRONX
GREAT SOUTH BAY
BABYLON
NASSAU
PASSAIC
EDGEWATER
RIVER
SEAFORD
HACKENSACK
HUDSON
MANHATTAN
QUEENS
HOBOKEN
ESSEX
PASSAIC
KEARNY
JERSEY CITY
EAST ROCKAWAY
ATLANTIC OCEAN
BROOKLYN
PORT NEWARK
UPPER N.Y. BAY
JAMAICA BAY
ELIZABETH
RUN 1
RUN 2
RUN 3
UNION
LINDEN
STATEN ISLAND
LOWER BAY
WOODBRIDGE
PERTH AMBOY
SANDY HOOK BAY
RARITAN BAY
SOUTH AMBOY
PORT MONMOUTH
MIDDLESEX
KEYPORT
MONMOUTH
WATER QUALITY SURVEY AREA
IN THE
INTERSTATE SANITATION DISTRICT
NEW YORK NEW JERSEY CONNECTICUT
SCALE IN MILES
1 0 1 2 4 6 8
1984

INTERSTATE SANITATION COMMISSION
WATER QUALITY SAMPLING STATIONS - HELICOPTER RUN 1

STATION	LATITUDE NORTH D M S	LONGITUDE WEST D M S	D E S C R I P T I O N
AK-03	40-38-18	74-11-45	At the center of & on the northside of the B&O R.R. Bridge
AK-07	40-35-35	74-12-22	Middle of mouth of Rahway River & in line with shoreline along Tremley Reach
AK-13	40-33-02	74-15-00	Mid-channel between Flashing Red Buoy #12 & Flashing Green, Black Buoy #1
AK-18	40-30-24	74-15-34	Mid-channel of Ward Point Bend (west) and opposite Perth Amboy Ferry Slip
AO-01	40-31-47	73-56-37	Flashing Red R "2" Gong (4 sec.)
JB-03	40-37-37	73-53-00	In channel 400 feet south of the end of Canarsie Pier
JB-05	40-35-45	73-48-40	At center pier of bridge over Beach Channel - Hammels
JB-07	40-38-52	73-49-20	At mouth of Bergen Basin, southeast of the sludge storage tank
LB-01	40-30-44	74-06-03	500 feet from Old Orchard Light in line with the beacon at Old Orchard Shore
NB-03	40-39-20	74-08-45	Northside of C.R.N.J. Bridge over the Newark Bay South Reach Channel (mid-channel)
NB-12	40-41-57	74-07-10	Newark Bay North Reach at mid channel northside of LVRR Bridge
RB-10	40-29-04	74-15-38	Qk Fl G "3" Buoy
RB-14	40-28-01	74-11-18	Buoy C "3" off Conaskonk Point at channel entrance to Keyport Harbor
RB-15	40-27-23	74-08-56	Private Fl G Buoy "1" on Belvedere Beach Point Comfort
RB-16	40-30-16	74-09-46	North side of Fl 4 sec 8M "20" Buoy located on northern boundary of Raritan Bay West Reach; off Huguenot Beach on Staten Island
RI-02	40-34-24	73-53-08	Under center of bridge from Barran Island to Rockaway
RI-03	40-33-21	73-56-51	Gong "9" Fl G 4 sec Buoy in Rockaway Inlet; northwest of Lookout Tower on Rockaway Point

INTERSTATE SANITATION COMMISSION
WATER QUALITY SAMPLING STATIONS - HELICOPTER RUN 2

STATION	LATITUDE NORTH D M S	LONGITUDE WEST D M S	DESCRIPTION
HA-02	40-50-44	73-55-45	Hamilton Bridge (middle bridge of 3)
HR-01	40-42-20	74-01-36	Mid-channel of Hudson River N-S: Line of black buoys E-W: Fire Boat Pier (NY) and railroad pier (NJ)
HR-02	40-45-17	74-00-58	Mid-channel of Hudson River E-W: Heliport (NY) and Seatrain pier (NJ)
HR-03	40-47-41	73-59-09	Mid-channel of Hudson River E-W: Soldiers & Sailors Monument (NY) and circular apartment buildings (NJ)
HR-04	40-51-04	73-57-04	Mid-channel of Hudson River under George Washington Bridge
HR-05	40-52-40	73-55-02	Mid-channel of Spuyten Duyvil Creek under Henry Hudson Bridge
HR-07	40-56-51	73-54-27	Mid-channel of Hudson River E-W: Opposite Phelps Dodge (Yonkers)
LB-02	40-33-45	74-04-20	B.W. Bell off Midland Beach
LB-03	40-34-03	73-59-00	200 feet south of Steeplechase Pier at Coney Island - N "2S"
LB-04	40-35-00	74-00-51	1/4 mile northeast of Norton Point, near the White Nun Buoy
NJ-08	40-31-28	74-02-07	Buoy R "10S" Gong Fl R at northwest end of Swash Channel
UH-03	40-39-14	74-03-35	Passaic Valley Outfalls E-W: Robbins Reef Light and forward water tower on Naval Dock N-S: Statue of Liberty and Black Bell Buoy #1-G
UH-11	40-39-05	74-05-10	Located in the Kill Van Kull, in mid-channel & directly opposite Fl G & Black Buoy #3
UH-13	40-36-26	74-02-45	Middle of channel in Narrows under Verrazano Bridge
UH-21	40-40-23	74-02-28	Main ship channel 10 yards to the west of Fl R Bell Buoy #30
UH-22	40-38-25	74-02-50	In mid-channel of Bay Ridge Channel E-W: Flashing Red Beacon on 69th St. Ferry Dock (Brooklyn) N-S: Fl G Bell Buoy #3 and Fl R Gong Buoy #22
UH-29	40-42-17	73-59-54	Mid-channel of East River in line with Pier #11 (Manhattan) and Pier #1 (Brooklyn)

INTERSTATE SANITATION COMMISSION
WATER QUALITY SAMPLING STATIONS - HELICOPTER RUN 3

STATION	LATITUDE NORTH D M S	LONGITUDE WEST D M S	D E S C R I P T I O N
ER-02	40-42-48	73-58-20	Under Williamsburg Bridge - mid-channel
ER-03	40-44-05	73-58-05	Mid-channel of East River E-W: Pier #73 (School Slip) Manhattan with open pier, foot of Greene Street, Brooklyn N-S: Poorhouse Flats Range
ER-09	40-47-26	73-54-53	Mid-channel of East River E-W: Fl R Bell Beacon on Wards Island with tall stack on Con Edison's Astoria Plant
ER-11	40-47-50	73-52-02	Mid-channel of East River E-W: Fl R Beacon (College Point) with stack on Rikers Island N-S: Line from center of Sanitation Pier (Hunts Point) with Fl R #4 Buoy (Station approximately 250 yards SE of #4 Buoy)
LI-15	40-47-58	73-47-38	Middle of Throgs Neck Bridge
LI-17	40-49-43	73-46-46	500 yards off Stepping Stone, north of Fl G "12" M Horn
LI-19	40-51-33	73-45-03	Off Bell "27" at Gang Way Rock
LI-24	40-53-57	73-44-27	At New Rochelle outfall approximately 500 yards south of R "2"
LI-25	40-55-25	73-42-01	Mamaroneck Fl 4 sec. Bell R "42"
LI-26	40-58-47	73-38-59	Port Chester off N "2"
LI-27	41-00-08	73-36-04	Captain's Harbor - Newfoundland Reef Fl R "4"
LI-28	40-59-42	73-33-58	Greenwich Point R N "34"
LI-29	41-00-54	73-32-14	Stamford between E int G 8M Horn & Fl R
LI-31	40-53-29	73-30-11	Oyster Bay Gong "1"
LI-32	40-54-39	73-38-07	Matinecock Pt. "21" Fl G 4 sec. Bell
LI-33	40-51-42	73-40-07	Hempstead Harbor midway between R 6 Bell and Fl 4 sec. "1"
LI-34	40-50-00	73-44-02	Manhasset Bay Fl G 4 sec. "1"
LI-35	40-59-33	73-28-53	At the disposal site designated as WLIS III N-S: Long Neck Point in Connecticut and Lloyd Point in New York

AMENDMENT TO COMMISSION WATER QUALITY REGULATIONS

As adopted in 1977, the Commission's Water Quality Regulations (Section 2.05(b)) contained maximum coliform limitations for treated sewage discharges. However, these applied only when disinfection of effluents was required by another regulatory agency with appropriate jurisdiction. As a result, disinfection practices in the Interstate Sanitation District have not been uniform. Since 1981, New Jersey has required year-round disinfection for discharges into Raritan Bay, but has allowed seasonal disinfection elsewhere (April 15 - October 15). In New York, disinfection year-round has been required for private facilities, by most public plants on Long Island Sound, and by the Oakwood Beach plant of New York City. Others have disinfected seasonally from May 15 through September 15. Connecticut has required disinfection year-round by all plants discharging into Long Island Sound. Consequently, both the applicability of the coliform limitations in Section 2.05(b) and the actual disinfection status of sewage discharges into the Region's waters have varied.

The Commissioner of Environmental Protection of the State of New Jersey in 1983 requested that ISC look into the matter of maintaining shellfish beds (especially in Raritan Bay) in condition to allow harvesting throughout the year. Many beds otherwise suitable for shellfish yields have been kept closed during the cold weather months when some of the sewage treatment plants in the area are not disinfecting their effluents.

The ISC examination of the situation included public hearings, at which the proponents and opponents of more extensive disinfection were requested to put their views and evidence on the record. State environmental and health agencies, the Food and Drug Administration of the federal Department of Health and Human Services, fishing interests, environmental oganizations, local governments and regional agencies operating sewage treatment plants, and a few others either testified or submitted statements for the hearing record.

There was evidence and argument presented on both sides of the issue of year-round disinfection. Some contended that extending year-round requirements for disinfection to all plants in the Region would not suffice to open shellfish beds because other sources of coliform contamination were too great to allow the waters to be brought within safe coliform limits for shellfish harvesting. Others contended that year-round disinfection would be an efficacious measure, both for its effect on shellfishing and as a general health measure. However, the case for neither side was incontrovertible. Consequently, the Commission was faced with the necessity of making a policy decision, as well as making what it could of the conflicting technical evidence. A Hearing Officers' Report was prepared to aid the Commissioners in digest-

ing the record.

After several months of consideration, the Commission at its September 19th meeting adopted an amendment to Section 2.05(b) of its Water Quality Regulations. This new regulation, which will take effect on July 1, 1986, requires the Commission's coliform effluent limitations to be met year-round by all dischargers into the Interstate Sanitation District, or into waters affecting the District, except for the stretch of the Hudson River above Yonkers. The amended Section 2.05(b) is shown in Appendix B.

As originally proposed, the amendment to the Regulations would have required year-round disinfection starting early in 1985. As finally adopted, however, the date was made July 1, 1986. The change was decided upon for two reasons. One is that some of the communities may need to construct facilities to cover their disinfection equipment during the winter. The other reason is that, for the plants which do not now disinfect year-round, some increase in costs will be involved. Such money will need to be included in the budgets of the affected agencies. The additional time will allow this to be done pursuant to regular fiscal processes.

APPLICATIONS FOR REDUCED TREATMENT

Section 301(h) of the Clean Water Act was made part of the law in 1977. It was originally designed to allow some West Coast communities discharging into deep ocean waters to provide less than secondary treatment. In each case, this was to be on a showing that such action would not have adverse environmental consequences. However, in the course of passage, the provision was broadened to be of general application to all coastal waters including estuaries. Communities were allowed to make applications on a time-limited basis. Within the Interstate Sanitation District 25 applications were made during 1982, of which three were disallowed on procedural or other technical grounds by the U. S. EPA.

Under Section 301(h) of the federal law, the U. S. EPA cannot consider an application for less than secondary treatment unless the state and/or interstate agency with appropriate jurisdiction concurs. It should be noted that while all three of the Commission's member states administer the NPDES permit system pursuant to delegations under Section 401 of the federal act, 301(h) permit modifications can only be finally granted by the U. S. EPA.

Connecticut made it very clear to its local governments that it would not entertain concurrences in any applications from them. Consequently, no applications were made by Connecticut dischargers along the shore of Long Island Sound.

In 1983, the Interstate Sanitation Commission denied concurrences for all of the applications. It did so by responding to the two questions asked by U. S. EPA pursuant to the statute in the concurrence process:

1. Would the applicant's proposal violate ISC Water Quality Regulations?

2. Would others be required to do more, if the application was granted, in order to allow receiving water quality standards in the waterways to be achieved or maintained?

The Commission's examination of each application separately and of the interrelated character of the waterways led to the conclusion that both of these questions should be answered in the affirmative. Consequently, the conclusion was that the proposed discharges of lesser treated sewage would have adverse impacts on the environment, both singly and collectively.

Under U. S. EPA regulations, applicants are allowed one reapplication after a denial of concurrence. Such reapplications were not made for most of the plants within the time allowed.

However, several of the communities did reapply. The reapplications were from Edgewater, Jersey City - East, West New York, Great Neck Village, Oyster Bay, and Westchester County on behalf of the Village of Mamaroneck. Concurrences were again denied by the Commission on much the same grounds as in the case of the first applications. A reapplication of the City of New York for its Newtown Creek plant is in process. Owing to an extension of time granted by the U. S. EPA to complete the submission of data, the reapplication will not be ready for reconsideration by the Commission until sometime in 1985.

REVISED U. S. EPA SECONDARY TREATMENT REGULATION

The Clean Water Act establishes secondary treatment for Publicly Owned Treatment Works as the required norm. However, the definition of this term is left for the U. S. EPA Administrator to make by regulation. The long-standing definition has involved treatment sufficient to produce effluents containing no more than 30 mg/l of BOD on a 30 consecutive day average and no more than 45 mg/l on a 7 consecutive day average. An 85% removal of BOD has also been part of the definition. Similar 30 mg/l and 45 mg/l limitations for 30 and 7 days, respectively, and 85% removal also apply to Suspended Solids.

Although there does not appear to have been any reason why trickling filters should have been considered differently than any other treatment process, provided that effluents produced by them meet the requirements of the definition, Congress in 1981 specifically declared that trickling filters could meet secondary treatment definitions. Ever since then, the contention has been made that in very cold northern climates, trickling filters may not be able to produce strictly to standard during the winter. The proposed solution has been to seek a redefinition of secondary treatment applicable only to trickling filters, with somewhat higher maximum effluent limitations for this mode of treatment only. Such a regulation, to be effective in November 1984, was issued by the U. S. EPA.

If this regulation is appropriate as a reasonable classification, and if the higher allowances may be considered secondary treatment equivalents for purposes of the federal statute, it is possible that a few of the communities which have sought liberalization of requirements through 301(h) applications may have their wishes satisfied under the more lenient special secondary treatment definition. At its December 1984 meeting, the Commission discussed the new U. S. EPA regulation and took no action to relax the ISC effluent requirements. However, the states may still wish to consider whether or not they desire to undertake conforming relaxations of their own requirements.

SYMPOSIUM ON REGIONAL ASPECTS OF ENVIRONMENTAL PROBLEMS

On May 1, 1984 the Commission, in cooperation with Wagner College, held a symposium entitled "Regional Aspects of Environmental Problems". The symposium was held at the Wagner College campus on Staten Island.

The sessions were chaired by ISC Commissioners. Officials from federal, state, and local levels of government took part in the program along with environmental agencies and environmental organizations.

As the title of the symposium suggests, the focus was on the regional nature of environmental problems in both water and air pollution. The program was a success in that it brought together a group with diverse interests and increased their awareness of the problems being encountered throughout the Region. The speakers and the audience were afforded the opportunity to have discussions on the subject matter.

III. AIR POLLUTION

GENERAL

The Commission's air program involves studies of specific air pollutants and the investigation and coordination of interstate problems. During 1984, the Commission continued its investigation of odor complaints, particularly on Staten Island. Emphasis is on interstate matters; however, the investigation of specific complaints often leads to the identification of intrastate problems. For the 12-month period ending September 30, 1984, the Commission received a total of 1,790 air pollution complaints. This figure represents an increase of 55% over the previous 12-month period.

The Commission took part in several New York and New Jersey hearings related to various aspects of air quality programs. The Commission's written statements and/or recommendations on particular subjects (sulfur dioxide emission reduction, implementation plans, etc.) were submitted to the appropriate agencies.

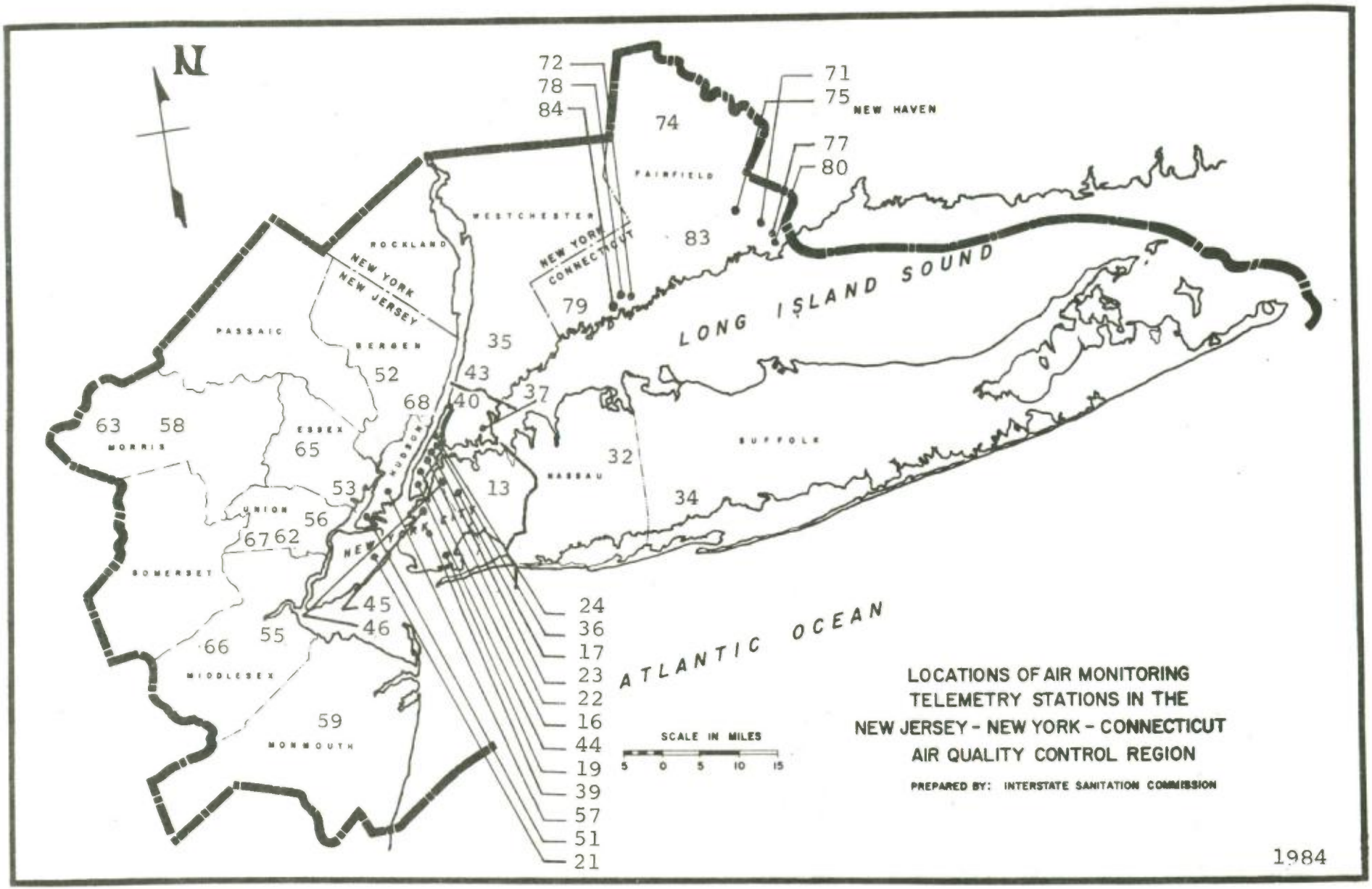
During the past year, the Commission continued to disseminate air quality and stagnation advisory reports for use by its three member States and New York City on a daily basis.

REGIONAL AIR POLLUTION WARNING SYSTEM

The Interstate Sanitation Commission is the coordinator of the New Jersey-New York-Connecticut Air Quality Control Region's High Air Pollution Alert and Warning System. Based on stagnation advisory reports and/or contaminant concentrations, the Commission may call for activation of the System. Upon notification of the participating federal, state, and local agencies by the Commission that the System has been activated, pollutant data are transmitted to and from the Commission using procedures agreed upon by all the participants. In 1984, conditions in the Region did not warrant activation of the System.

As previously agreed to by ISC and the member states of the ACQR, daily stagnation forecasts for the New Jersey-New York-Connecticut AQCR are prepared by the NYS DEC in Albany and transmitted to the Commission. ISC then transmits the information to all participating agencies.

There are 43 telemetry stations measuring pollutants in the New Jersey-New York-Connecticut AQCR. A map and a list of the station locations are shown on the following pages.



LOCATIONS OF AIR MONITORING
TELEMETRY STATIONS IN THE
NEW JERSEY - NEW YORK - CONNECTICUT
AIR QUALITY CONTROL REGION

PREPARED BY: INTERSTATE SANITATION COMMISSION

1984

AIR MONITORING TELEMETRY STATIONS
IN THE
NEW JERSEY-NEW YORK-CONNECTICUT
AIR QUALITY CONTROL REGION

ISC NO.	SITE OR CITY	COUNTY	STATE
13	Queens College	Queens	New York
16	Mabel Dean Bacon H.S.	New York	New York
17	Greenpoint	Kings	New York
19	Sheepshead Bay H.S.	Kings	New York
21	Susan Wagner H.S.	Richmond	New York
22	CCNY	New York	New York
23	45th Street	New York	New York
24	Canal Steet	New York	New York
32	Eisenhower Park	Nassau	New York
34	Babylon	Suffolk	New York
35	White Plains	Westchester	New York
36	I.S. 45	New York	New York
37	I.S. 155	Bronx	New York
39	P.S. 321	Kings	New York
40	P.S. 2	Bronx	New York
43	Yonkers	Westchester	New York
44	World Trade Center	New York	New York
45	Brooklyn Transit	Kings	New York
46	P.S. 112	Queens	New York
51	Bayonne	Hudson	New Jersey
52	Hackensack	Bergen	New Jersey
53	Newark	Essex	New Jersey
55	Perth Amboy	Middlesex	New Jersey
56	Elizabeth	Union	New Jersey
57	Jersey City	Hudson	New Jersey
58	Morristown	Morris	New Jersey
59	Freehold	Monmouth	New Jersey
62	Elizabeth	Union	New Jersey
63	Chester	Morris	New Jersey
65	East Orange	Essex	New Jersey
66	New Brunswick	Middlesex	New Jersey
67	Plainfield	Union	New Jersey
68	Cliffside Park	Bergen	New Jersey
71	Bridgeport	Fairfield	Connecticut
72	Stamford	Fairfield	Connecticut
74	Danbury	Fairfield	Connecticut
75	Stratford	Fairfield	Connecticut
77	Bridgeport	Fairfield	Connecticut
78	Stamford	Fairfield	Connecticut
79	Greenwich	Fairfield	Connecticut
80	Bridgeport	Fairfield	Connecticut
83	Norwalk	Fairfield	Connecticut
84	Stamford	Fairfield	Connecticut

AIR POLLUTION COMPLAINTS

In 1984, the Commission continued to respond to and investigate air pollution complaints. These investigations are labor intensive. Their proper performance requires that staff members be physically present at the locations where the complaints are made, at the source of the pollution, and at other points in the area, as appropriate. The heavily industrialized area of the New York-New Jersey border in the vicinity of Staten Island, more than any other single area under the jurisdiction of the Commission, generates citizen complaints attributable to interstate transport of airborne pollutants. Since September 1982, the Commission established a Staten Island field office to expedite response to air pollution complaints.

For the 12-month period ending September 30, the Commission received a total of 1,790 complaints. This represents an increase of 55% and 107% over the comparable 12-month periods in 1983 and 1982, respectively. The complaints received by the Commission during this period were grouped and categorized by: (1) community from which the complaints were made, (2) type of odor, (3) time of day, and (4) day of the week. Tables showing each of these breakdowns are shown on the following pages.

Twenty-three Staten Island communities were the source of twenty or more complaints each. Travis, Eltingville, and Grymes Hill were the only communities where the number of odor complaints decreased in 1984 compared to 1983; all other communities showed an increase in the number of complaints.

Citizens' descriptions of odors were classified into ten categories. Odor descriptions during the past 12-month period were similar to those reported in previous years. The category "cat urine", with 590 occurrences, constituted 33% of the total number of complaints received. It should be noted that the category "chemical and others", with 33.3% of the total number of complaints, represents odors that were described as chemical, as well as odors of an unknown nature (could not be specifically described by the complainant).

It is important for surveillance purposes to recognize when the majority of pollution complaints are being made. The total number of complaints that were received during each month were grouped into three time intervals -- midnight - 8:00 a.m., 8:00 a.m. - 4:00 p.m., and 4:00 p.m. - midnight. The table shows that approximately 52% of the complaints were received between 4:00 p.m. and midnight. From this table it can also be seen that 1041 complaints, or 58.2% of the total, were made in four of the twelve months -- October and November 1983, and August and September 1984.

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY COMMUNITY ON STATEN ISLAND FROM OCTOBER 1983 TO SEPTEMBER 1984

COMMUNITY	COMPLAINTS	
	NUMBER	% OF TOTAL
Arden Heights	177	9.9
Travis	122	6.8
New Springville	106	5.9
Annadale	103	5.8
Great Kills	101	5.6
Mariner's Harbor	92	5.2
Bull's Head	87	4.9
Westerleigh	86	4.8
Tottenville	74	4.1
Huguenot	71	4.0
West New Brighton	70	3.9
Eltingville	60	3.4
Port Richmond	50	2.8
Willowbrook	49	2.7
Castleton Corners	48	2.7
Graniteville	42	2.3
Richmondtown	38	2.1
Dongan Hills	37	2.1
New Dorp	31	1.7
St. George	28	1.6
Grymes Hill	25	1.4
Sunnyside	25	1.4
Sunset Hill	22	1.2
All Others *	246	13.7
TOTALS	1790	100.0

* Represents 34 communities from which 20 or fewer complaints were reported per community. Also includes 55 complaints where the complainant would not identify their location.

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY TYPE OF ODOR

FROM STATEN ISLAND COMMUNITIES

OCTOBER 1983 TO SEPTEMBER 1984

TYPE OF ODOR	COMPLAINTS	
	NUMBER	% OF TOTAL
Cat Urine	590	33.0
Gassy	143	8.0
Garbage	136	7.6
Burning Rubber/Plastic	124	6.9
Sulfur/Eggy	99	5.5
Onion/Garlic	53	3.0
Sewage	31	1.7
Dead Fish/Fishy	12	0.7
Soap/Detergent	6	0.3
Chemical & Others	596	33.3
TOTALS	1790	100.0

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY TIME OF DAY

FROM STATEN ISLAND COMMUNITIES

OCTOBER 1983 TO SEPTEMBER 1984

MONTH	NUMBER OF COMPLAINTS				
	Time of Complaints*				
	Midnight to 8:00 AM	8:00 AM to 4:00 PM	4:00 PM to Midnight	TOTAL	% OF TOTAL
October 1983	52	98	108	258	14.4
November 1983	32	101	183	316	17.7
December 1983	7	25	42	74	4.1
January 1984	13	14	49	76	4.3
February 1984	11	27	21	59	3.3
March 1984	5	8	34	47	2.6
April 1984	6	27	43	76	4.3
May 1984	24	17	56	97	5.4
June 1984	26	48	112	186	10.4
July 1984	26	27	81	134	7.4
August 1984	39	71	108	218	12.2
September 1984	69	83	97	249	13.9
TOTALS	310	546	934	1790	
% OF TOTAL	17.3	30.5	52.2		100.0

* Includes Weekends and Holidays

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY DAY OF WEEK

FROM STATEN ISLAND COMMUNITIES

OCTOBER 1983 TO SEPTEMBER 1984

	NUMBER OF COMPLAINTS						
	Day of Complaints*						
MONTH	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
October 1983	31	20	31	85	51	24	16
November 1983	40	58	37	22	88	44	27
December 1983	15	7	3	8	10	16	15
January 1984	15	29	8	1	12	9	2
February 1984	10	12	13	8	2	14	0
March 1984	10	1	6	9	11	7	3
April 1984	22	15	9	5	6	8	11
May 1984	10	17	9	15	12	22	12
June 1984	54	20	25	22	24	29	12
July 1984	33	23	16	25	11	10	16
August 1984	15	14	11	65	71	1	41
September 1984	15	31	42	20	50	63	28
TOTALS	270	247	210	285	348	247	183
% OF TOTAL	15.1	13.8	11.7	15.9	19.5	13.8	10.2

* Includes Holidays

The complaints were also grouped by the day of the week on which they were received. For the 12-month period ending September 30, 1984, the number of complaints per day of the week ranged from a low of 183, or 10.2% of the total, on Sundays to a high of 348, or 19.5% of the total, on Fridays.

Until November 1984, the Commission had one full-time inspector on Staten Island. The Staten Island office was staffed Wednesdays through Fridays from 4 p.m. to 11:30 p.m. and Saturdays and Sundays from 2 p.m. to 9:30 p.m. Although there was no inspector present on a regular basis on Staten Island during the other time periods, complaints were handled at the Commission office during regular hours and, if necessary, Commission personnel were reached at home by ISC's answering service during non-office hours. In November 1984, the Commission hired a full-time inspector whose time is divided between water and air pollution duties. The addition of this person has permitted increased staffing of the Staten Island office. That office is now staffed 7 days per week for one shift and several days per week for two shifts.

NEW YORK STATE ACID RAIN POLICY

In 1983, the Governor's Energy and Environment Subcabinet gave the New York State Department of Environmental Conservation (NYS DEC) the task of reviewing its existing policy concerning sulfur dioxide emissions. The extent of damage and the growing public concern in New York attributable to acidic deposition prompted NYS DEC to develop a new policy to mitigate sulfur deposition. In July 1984, the State Acid Deposition Control Act was passed and by August 1984 the legislation was signed by Governor Cuomo.

The Commission, in support of the NYS DEC effort, presented its statement in a public hearing held by the State of New York. It was the Commission's view that the problem is regional and even national in scope. Nevertheless, New York is to be commended for indicating that it proposes to do its share to reduce the forms of air pollution that cause the phenomenon commonly known as acid rain. It is also important to note that New York cannot solve the problem alone because so much of the air contamination comes from outside the State's borders. Thus, the success of what New York attempts to do will depend on the motivation and inspiration which it provides for other states.

The oxides of sulfur in the ambient air are not entirely a problem with long-distance origins. A significant share of this type of pollutant breathed by the people in the Greater New York Metropolitan Area comes from local sources. Similarly, the atmospheric acidic damage to urban property can be attributed in significant part to close-by emissions. Because this urban region is interstate in character, local emissions are also a major regional and interstate factor. As NYS DEC's studies and plans proceed, it would be desirable to consider effects on urban places directly, as well as their by-product relationship to rural and suburban areas.

WASTEWATER TREATMENT PLANTS
Discharging into the
INTERSTATE SANITATION DISTRICT WATERS
1 9 8 4

Plant	ISC Receiving Water Classification	Date of Const.	Flow MGD Average	Flow MGD Design	Type of Treatment	Estimated Population Served (1975-84)
CONNECTICUT						
Fairfield County						
Bridgeport - East Side	B-1	1973+	16.1	24.0	Secondary (AS)	100,000
- West Side	B-1	1973+	30.0	60.0	Secondary (AS)	175,000
Fairfield	A	1982+	7.3	9.0	Secondary (AS)	50,000
Greenwich	A	1964+	11.6	8.5	Secondary (AS)	35,000
Norwalk	B-1	1980+	12.2	15.0	Secondary (AS)	58,000
Stamford	B-1	1976+	22.0	20.0	Secondary (AS)	100,000
Stratford	A	1982+	9.1	11.5	Secondary (AS)	49,000
Westport	A	1975+	1.3	2.8	Secondary (AS)	12,000
New Haven County						
Milford - Beaver Brook	A	1969	2.4	3.1	Secondary (AS)	11,000
- Gulf Pond	A	1976+	4.0	2.9	Secondary (AS)	16,000
- Harbor	A	1955+	0.6	0.5	Secondary (AS)	5,000
- Housatonic	A	**	-	8.3	Secondary (AS)	43,000
- Town Meadows	A	1953	2.5	1.2	Secondary (AS)	6,000
New Haven - Boulevard	B-1	1969+	12.3	13.0	Primary	81,000
- East Shore	B-1	1981+	12.1	40.0	Secondary (AS)	67,000
- East Street	B-1	1967+	12.4	20.0	Primary	61,000
West Haven	B-1	1984+	8.5	12.5	Secondary (AS)	70,000
NEW JERSEY						
Bergen County						
Edgewater	B-1	1958+	3.3	3.0	Primary	21,000
Essex County						
Passaic Valley Sewerage Commissioners	B-1	1981+	256.0	300.0	Secondary (AS)	1,200,000
Hudson County						
Bayonne	B-2	1953	13.5	21.0	Primary	70,000
Hoboken	B-1	1955	12.9	20.7	Primary	45,000
Jersey City - East Side	B-1	1967+	34.6	46.6	Primary	159,000
- West Side	B-2	1967+	21.0	36.0	Primary	115,000
Kearny	B-2	1955	2.6	4.0	Primary	30,000
West New York	B-1	1982+	7.3	10.0	Primary	65,000
Woodcliff - North Bergen	B-1	1962	2.6	3.3	Primary	36,000
Middlesex County						
Carteret	B-2	1950	3.5	3.0	Primary	21,000
Middlesex County Utilities Authority	A	1978+	97.2	120.0	Secondary (AS)	600,000
Old Bridge Township	A	1962	1.2	1.4	Primary	12,000
Perth Amboy	A	1984+	3.6	10.0	Primary	39,000
Rahway Valley Sewerage Authority	B-2	1973+	32.4	35.0	Secondary (AS)	215,000
Sayreville - Melrose	A	1947	0.08	0.15	Primary	2,000
- Morgan	A	1947	0.2	0.3	Primary	9,000
South Amboy	A	1930	0.8	0.8	Primary	9,000
Woodbridge	B-2	1952	4.7	10.0	Primary	33,000
Monmouth County						
Atlantic Highlands	A	1927	0.6	0.6	Primary	5,000
Highlands	A	1928	0.5	1.2	Primary	5,000
Union County						
Joint Meeting of Essex & Union Counties	B-2	1977+	71.7	75.0	Secondary (AS)	500,000
Linden Roselle Sewerage Authority	B-2	1982+	12.4	17.0	Secondary (AS)	60,000

WASTEWATER TREATMENT PLANTS
Discharging into the
INTERSTATE SANITATION DISTRICT WATERS
1 9 8 4

Plant	ISC Receiving Water Classification	Date of Const.	Flow MGD Average	Flow MGD Design	Type of Treatment	Estimated Population Served (1975-84)
NEW YORK						
Nassau County						
Bay Park	A	1960+	68.9	60.0	Secondary (AS)	558,000
Belgrave Sewer District	A	1973+	1.8	2.0	Secondary (TF)	12,000
Cedar Creek	A	1983+	41.6	45.0	Secondary (AS)	370,000
Cedarhurst	A	1968+	1.3	1.0	Secondary (TF)	7,500
Cold Spring Harbor Laboratory*	A	1975	0.05	0.075	Physical/Chemical	250 - 400
Glen Cove	A	1977+	4.6	8.0	Secondary (AS)	24,000
Great Neck Sewer District	A	1976+	2.6	2.7	Secondary (TF)	15,000
Great Neck Village	A	1968+	1.1	1.5	Secondary (TF)	11,000
Inwood	A	1961+	1.4	2.3	Secondary (TF)	12,000
Jones Beach	A	1952	0.2	2.5	Secondary (TF)	Seasonal
Lawrence	A	1967+	1.4	1.5	Secondary (TF)	6,000
Long Beach	A	1965+	7.2	6.4	Secondary (BO)	40,000
Oyster Bay Sewer District	A	1963+	2.0	1.5	Secondary (TF)	8,000
Port Washington Sewer District	A	1969+	3.6	3.0	Secondary (TF)	30,000
Roslyn	A	1965+	0.5	0.5	Secondary (TF)	2,500
West Long Beach Sewer District	A	1983+	0.7	1.5	Secondary (TF)	4,000
New York City						
Bronx County						
Hunts Point	B-2	1978+	129.6	200.0	Secondary (AS)	895,000
Kings County (Brooklyn)						
Coney Island	A	1958+	111.9	110.0	Secondary (AS)	690,000
Newtown Creek	B-2	1967	308.0	310.0	Secondary (AS)	1,100,000
Owls Head	B-1	1952	107.3	160.0	Secondary (AS)	785,000
Red Hook	B-2	**	-	60.0	Secondary (AS)	130,000
26th Ward	A	1975+	55.0	85.0	Secondary (AS)	301,000
New York County (Manhattan)						
North River	B-1	**	-	170.0	Secondary (AS)	741,000
Wards Island	B-2	1978+	344.0	250.0	Secondary (AS)	1,300,000
Queens County						
Bowery Bay	B-2	1978+	155.6	150.0	Secondary (AS)	712,000
Jamaica	A	1977+	105.1	100.0	Secondary (AS)	585,000
Rockaway	A	1972+	24.7	45.0	Secondary (AS)	72,000
Tallman Island	B-1	1972+	73.6	80.0	Secondary (AS)	465,000
Richmond County (Staten Island)						
Arthur Kill Correctional Facility*	B-2	1969	0.07	0.1	Secondary (AS)	1,000
Elmwood Homes*	B-2	1978+	0.8	1.0	Extended Aeration	9,000
Elmwood Park Condominiums*	B-2	1976	0.5	2.5	Secondary (RD)	4,000
Heartland Village*	B-2	1968	-	1.0	Extended Aeration	7,000
IS-7*	A	1965	-	0.13	Extended Aeration w/ Sand Filtration	2,000
Mount Loretto Home - Plant #1*	A	1962	-	-	Septic Tank	500
- Plant #2*	A	1962	-	-	Septic Tank	200
Oakwood Beach	A	1979+	29.7	40.0	Secondary (AS)	286,000
Port Richmond	B-2	1979+	48.6	60.0	Secondary (AS)	210,000
Richmond Memorial Hospital*	A	1936	-	0.04	Secondary (AS)	400
Saint Joseph's School*	A	1963	-	0.02	Septic Tank with Sand Filtration	1,000
Village Green*	B-2	1970	0.5	1.0	Extended Aeration	5,000
Rockland County						
Joint Regional Sewerage Board-Town of Haverstraw	A	1980+	6.0	8.0	Secondary (AS)	40,000
Orange & Rockland Utilities*	A	1980+	0.003	0.0028	Secondary (AS)	Industrial
Orangetown Sewer District	A	1968+	7.5	8.5	Secondary (TF)	52,000

WASTEWATER TREATMENT PLANTS
Discharging into the
INTERSTATE SANITATION DISTRICT WATERS
1 9 8 4

Plant	ISC Receiving Water Classification	Date of Const.	Flow MGD Average	Flow MGD Design	Type of Treatment	Estimated Population Served (1975-84)
NEW YORK (Continued)						
Rockland County (Continued)						
Palisades Interstate Park						
Bear Mountain Plant	A	1967+	-	0.25	Secondary (TF)	Seasonal
Tallman Mountain Plant	A	1968	-	0.01	Secondary (AS)	Seasonal
Rockland County Sewer District #1	A	1984+	20.7	10.0	Secondary (AS)	160,000
Stony Point	A	1969	1.2	1.0	Secondary (AS)	10,000
Suffolk County						
Huntington Sewer District	A	1956+	2.0	2.5	Secondary (TF)	15,000
Northport	A	1973+	0.4	0.3	Secondary (AS)	3,000
Suffolk County Sewer District #1	A	1974+	0.6	2.5	Primary	3,000
Suffolk County Sewer District #3	A	1975	11.3	30.0	Secondary (AS)	300,000
Suffolk County Sewer District #6	A	1974+	0.8	2.0	Secondary (AS)	6,000
SUNY at Stony Brook	A	1974	2.0	2.5	Primary	10,000
Westchester County						
Blind Brook (Rye)	A	1983+	3.6	5.0	Secondary(AS)	27,000
Buchanan	A	1962	0.2	0.55	Secondary (AS)	2,500
Kings Ferry Sewer Association*	A	1971	0.06	0.05	Secondary (AS)	500
Mamaroneck	A	1965+	19.3	17.0	Primary	77,000
Metro North (Harmon Shop)*	A	1984+	0.2	0.40	Physical/Chemical	Industrial
New Rochelle	A	1982+	18.5	16.0	Secondary (AS)	75,000
Ossining	A	1981	5.2	7.5	Secondary (AS)	33,000
Peekskill	A	1979+	6.0	10.0	Secondary (AS)	35,000
Port Chester	B-1	1964+	6.3	6.9	Primary	26,000
Springvale Apartments Company*	A	1957	0.1	0.1	Secondary (TF)	1,000
Yonkers Joint Treatment	B-1	1977+	110.1	92.0	Secondary (AS)	500,000
FEDERAL & MILITARY						
Camp Smith - (Westchester Co.)	A	1965	0.2	0.24	Secondary (TF)	2,000
FDR Veterans Administration Medical Center (Westchester Co.)	A	1982+	0.2	0.4	Secondary (TF)	3,000
Gateway National Recreation Area (Floyd Bennett Field, Kings Co.)	A	1981+	0.2	0.4	Secondary (TF)	1,500
Military Ocean Terminal (Hudson Co.)	B-1	1982+	0.13	0.18	Secondary (AS)	3,000

NOTES:
+ Year of major additions or reconstruction
* Private or institutional sewage treatment plant
** Under construction
(AS) Activated Sludge
(TF) Trickling Filter
(RD) Rotating Disc
(BO) Biochemical Oxidation

INTERSTATE SANITATION COMMISSION
AMENDMENT TO SECTION 2.05(b) OF
WATER QUALITY REGULATIONS

Effective July 1, 1986, Section 2.05(b) of the Water Quality Regulations of the Interstate Sanitation Commission is amended to read as follows:

Sec. 2.05(b). Fecal coliform content shall not exceed 200 per 100 ml on a 30 consecutive day average; 400 per 100 ml on a 7 consecutive day average; and 800 per 100 ml on a 6 consecutive hour average but no sample may contain more than 2400 per 100 ml. The only portion of the Interstate Sanitation District to which this provision shall not apply at all times is that referred to in Section 3.01(a)(2) hereof. For the aforementioned portion of the District, these disinfection requirements shall apply when disinfection is required to protect the best intended uses of the waters in question. For example, in the case of discharge into waters used primarily for bathing, this bacterial standard need not be required except during the bathing season.

NOTE: Underscored words are new language not in present Section 2.05(b).

G L O S S A R Y

AQCR	air quality control region
BOD	biochemical oxygen demand
CCNY	City College of New York
CSO	combined sewer overflow
CWA	Clean Water Act
DEC	Department of Environmental Conservation
EPA	Environmental Protection Agency
FDA	Food and Drug Administration
GC/MS	gas chromatograph/mass spectrophotometer
HP	horsepower
H.S.	high school
HCUA	Hudson County Utilities Authority
HVAC	heating, ventilating, and air conditioning
I/I	infiltration/inflow
I.S.	intermediate school
ISC	Interstate Sanitation Commission
MCUA	Middlesex County Utilities Authority
MGD	million gallons per day
mg/l	milligrams per liter
NPDES	National Pollutant Discharge Elimination System
N/SPDES	National/State Pollutant Discharge Elimination System
POTWs	publicly owned treatment works
P.S.	public school
PVSC	Passaic Valley Sewerage Commissioners
SSES	sewer system evaluation study
SUNY	State University of New York
µg/l	micrograms per liter