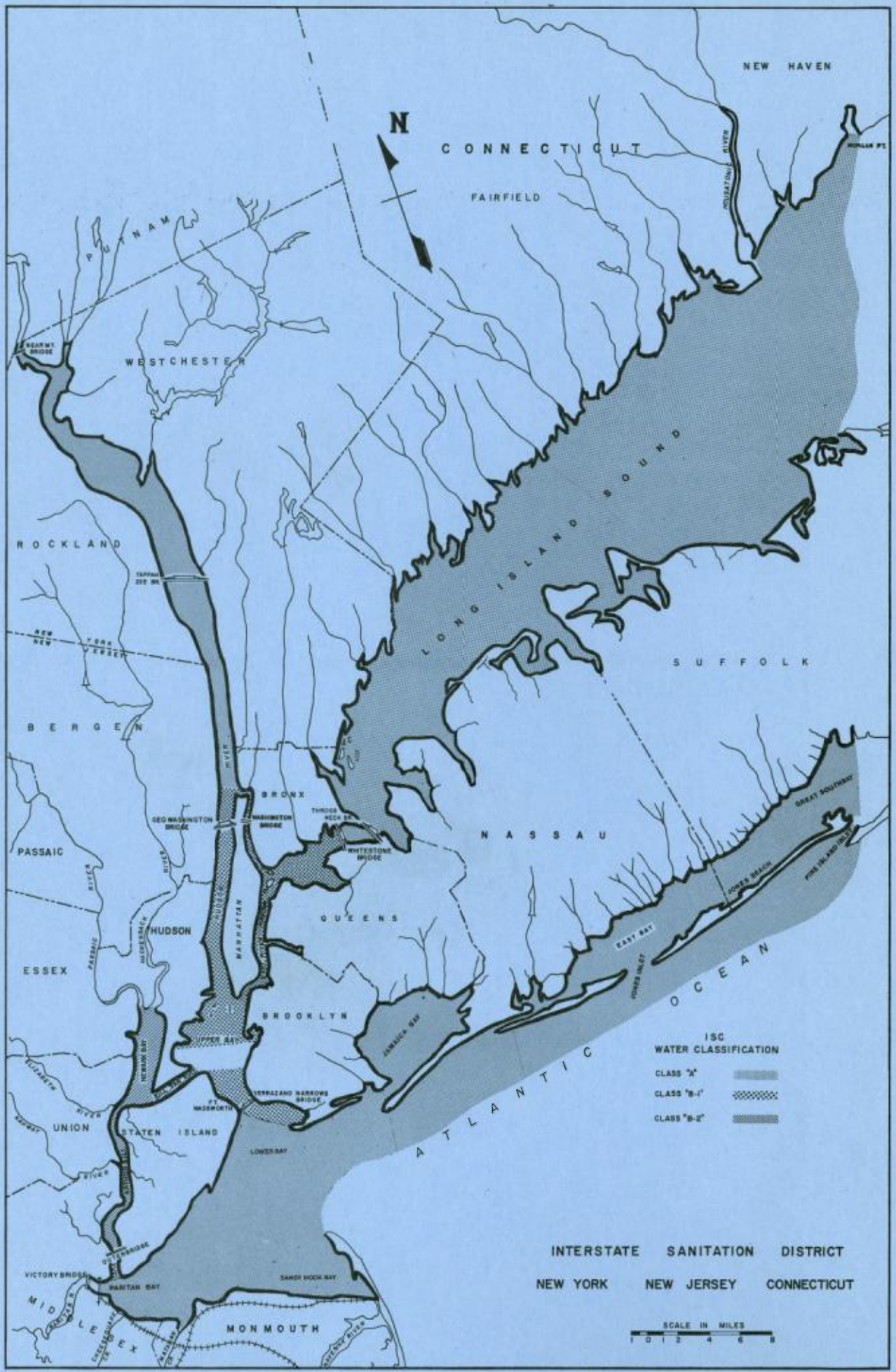
INTERSTATE SANITATION COMMISSION 1990

INTERSTATE SANITATION COMMISSION

A TRI-STATE ENVIRONMENTAL AGENCY

1990
ANNUAL REPORT

NEW YORK NEW JERSEY CONNECTICUT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NEW YORK NEW JERSEY CONNECTICUT
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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

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January 24, 1991

To His Excellency, Jim Florio
His Excellency, Lowell P. Weicker, Jr.
His Excellency, Mario Cuomo
and the Legislatures of the States of
New Jersey, Connecticut, and New York

Your Excellencies:

The Interstate Sanitation Commission respectfully submits its report for the year 1990.

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 Jersey — Acting Chairman

For the State of Connecticut — Vice-Chairman

For the State of New York — Treasurer

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STATEMENT OF THE CHAIRMAN
OF THE
INTERSTATE SANITATION COMMISSION

If 1990 is any indicator, our tri-state District will benefit from a considerable improvement in water quality throughout the decade. Despite severe cuts in our budget in 1989, the ISC still was able to meet its responsibilities, albeit more limited commitments in water testing and sampling as well as in regulation and enforcement -- including litigation, when we could find no other alternative.

We are pleased to report that our litigation against five New Jersey municipalities has been resolved and agreements with all parties entered in the Court. Jersey City and Bayonne have tied into the Passaic Valley Sewerage Commissioners' regional facility. In North Bergen, construction of an upgraded treatment plant in Woodcliff has been completed while planning and construction schedules have been established for West New York and Hoboken. We'll be monitoring them closely under a system of fines that can be invoked if the schedules are violated. The end result will be that the wastewater treatment plants in these Hudson County communities will all be upgraded to secondary treatment, to the benefit of citizens on both sides of the Hudson River.

In the matter of the New York City sewage treatment plant permit hearings, the ISC has been an active and vigorous participant. (Last year we were granted full party status to these hearings as a result of our suit in State Supreme Court in which the Court ordered that an adjudicatory hearing be held.) The ISC is pursuing numerous proposals for modification of the permits that will better protect the environment of our entire tri-state District.

In the Fresh Kills Landfill action, we believe we are approaching a final resolution in which a single-barge enclosed unloader will be utilized during transfer operations.

With regard to our sampling activities, we were disappointed with the results of our efforts in the Hudson, north of the Harlem River. We sampled with an eye toward opening up these waters for swimming -- but some areas did not reflect enough improvement to meet the criteria for safe swimming. This, once again, underlines the region's pressing need to mitigate the adverse effects of discharges from combined sewer overflows, a condition the ISC has long been fighting and will continue to champion as a top priority.

On a happier note, we were gratified that ISC data from samplings in the New York portion of Raritan Bay enabled the New York State DEC to open 12,000 acres of waterways at the earliest possible date in May for a shellfish transplant program. In

fact, the data indicated that approximately half the acreage met the criteria for depuration which underscores the progress we are achieving in this region.

This prompts me to reiterate my long-standing hope that the ISC, along with environmental agencies across the country, be provided with enough funds to open hundreds of thousands of additional acres of waterways for fishing, clamming and recreational sports throughout the 1990s. The dollar amounts needed, relative to other budget items, are small...yet the potential in health, recreational and economic benefits so great.

On the question of budget, I want to express my appreciation for the support of the New York and New Jersey legislatures, despite the financial pressures of the times. I remain optimistic that our funding will be restored so that we can continue to strive for higher environmental quality throughout our tri-state region.

I also wanted to register the Commission's endorsement of the Report by the New York State Legislative Commission on Expenditure Review which focuses on the ISC's role in regulating air and water pollution in the metropolitan area and its relationships with the environmental departments in New York, New Jersey and Connecticut. Among the recommendations in the Report -- which we hope to see implemented -- is the suggestion that the Legislature convene a regional conference of members of the states' legislatures, environmental agencies, ISC members and others to clarify the role of the Commission -- particularly in the areas of regulations and enforcement, in which the ISC has been actively involved, at the urging of the State Legislatures.

Finally, on behalf of the Commission and my fellow Commissioners, I offer sincere gratitude to Anthony Vaccarello for nine years of dedicated service as a commissioner and, most recently, as ISC chairman. Despite his full schedule of business responsibilities and public service activities, Commissioner Vaccarello unstintingly gave of his time, energies and expertise whenever they were needed. During the months when the Commission's very existence was threatened, he stood firm against those who would have us abrogate our responsibility and compromise our standards. As Chairman and as Commissioner, his first and only consideration was the environment.

Frank A. Pecci
Acting Chairman

C O N T E N T S

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

I. EXECUTIVE SUMMARY

The Interstate Sanitation Commission has been involved in the abatement and control of water pollution in the tidal waters of the New York-New Jersey Metropolitan Area since 1936. 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 May, for the third consecutive year, a single-source ozone message system to provide precautionary health advice to the public was initiated and continued through the summer. The Commission is the focal point for receiving data from the States of Connecticut and New Jersey and disseminating health messages to radio and television stations, as well as government agencies, in the Region.

All programs of the ISC, including field and laboratory support, are goal-oriented to address specific environmental deficiencies or to assure compliance with the Tri-State Compact and the Commission's Water Quality Regulations. Samplings done by the Commission -- whether at sewage treatment plants, industries, in the ambient waters or in the air -- are for gathering information for enforcement actions, opening waters for shellfishing, opening waters for swimming, the development of water quality and/or effluent criteria and other specific situations, as they arise.

District waters have improved, in general, with respect to dissolved oxygen (D.O.) and coliform bacteria densities. Although surface waters meet D.O. requirements during the winter, episodes of hypoxia occur during the summer. The reduction of coliform bacteria concentrations, due a great extent to the Commission's year-round disinfection regulations which took effect in 1986, enabled the New York State Department of Conservation (NYS DEC) to extend the season for 16,000 acres of shellfish beds in the Atlantic Ocean off the Rockaways for direct harvesting in 1987. Subsequently, all seasonal restrictions were removed on December 14, 1988. The New Jersey Department of Environmental Protection (NJ DEP) remanded the seasonal restriction for 13,000 acres in Sandy Hook/Raritan Bays for depuration harvesting in 1989. At the request of the NYS DEC, the Commission sampled the New York portion of Raritan Bay in early 1990. As a result of this data collection effort, NYS DEC was able to open 12,000 acres in Raritan Bay for transplant harvesting of hard clams in mid-May 1990. Approximately one-half of the area sampled met the criteria for depuration harvesting.

Operations at the Commission have been severely curtailed since July 1989, due to a 35% budget cut. The States' actions

resulted in ISC employee layoffs and several more employees resigning. Most of the ambient and effluent water quality sampling programs have been drastically reduced. The air pollution programs were drastically reduced except for the Staten Island odor complaint answering service. Nonetheless, dedicated staff members have performed in an exemplary fashion to fulfill the technical and administrative tasks.

This report provides a record of the water and air pollution activities of the Interstate Sanitation Commission. All of the Commission's programs are goal-oriented to better the Region's environment. To address the environmental problems within its area of jurisdiction, the Commission has focused on technical assistance, enforcement, planning, laboratory analysis, monitoring and coordination.

WATER POLLUTION

The Commission's program for water pollution abatement has continued to provide assistance in effectively coordinating approaches to regional programs. Priorities have been set for enforcement, minimization of the effects of combined sewers, compliance monitoring, pretreatment of industrial wastes, toxics contamination, participation in the National Estuary Program, ocean disposal and monitoring the ambient waters -- especially with regard to opening new areas for swimming and shellfishing.

A great deal of planning and construction has been underway and will provide for the reduction of pollution from municipal and industrial wastewaters discharging into District waters. It is estimated that more than $6 billion has been allocated by municipalities in the District for this purpose.

The Commission is involved in several legal actions which are detailed in the Legal Activities section of this report and are highlighted as follows:

- party status requiring the New York State Department of Environmental Conservation (NYS DEC) to hold hearings in regards to the final State Pollutant Discharge Elimination System (SPDES) permits which that department issued for the 14 New York City water pollution control plants (WPCPs).

- party status for an adjudicatory hearing regarding SPDES permit modifications at the Yonkers Joint Wastewater Treatment Plant in Westchester County, N.Y. that resulted in permit stipulations to protect water quality.

- actively involved with five Hudson County, New Jersey communities as to upgrading or eliminating their WPCPs to

meet Commission and federal standards.

- actively involved with the Brooklyn Navy Yard Resource Recovery Facility adjudicatory hearing.

- monitoring of the New York City Fresh Kills Landfill operations by land and sea to check compliance with a 1987 Consent Order.

ISC completed a study in 1988 giving a regional perspective to the combined sewer overflow (CSO) problems that exist in the Interstate Sanitation District. The Commission held a regional CSO conference in 1989 and has since held meetings with representatives of the environmental departments of all three member states and the U.S. EPA to discuss CSOs on a regional basis.

A region-wide inventory of waterfront development projects within the District was updated again. A continuing concern is how additional wastewater from residential and mixed-use buildings, as well as hotels, marinas and recreational facilities, will be treated.

ISC is a member of the Management Committees for the Long Island Sound Estuary Study and the New York-New Jersey Harbor Estuary Program, both part of the U.S. EPA's National Estuary Program. The Commission also participated on work groups for several of the studies' work modules including floatables, pathogens and toxics.

ISC continued to monitor waste discharges from public and private treatment plants to check compliance with NPDES permit limitations . One intensive survey was conducted in Raritan Bay using the ISC research vessel, the R/V Natale Colosi. A coliform survey from both shorelines of the Hudson River was conducted to determine whether that portion of the Hudson north of the Harlem River to Bear Mountain is meeting the water quality requirement for swimming.

In August, a boat inspection trip was held in a portion of the Interstate Sanitation District: Lower New York Bay, Raritan Bay, Arthur Kill/Kill Van Kull, Upper New York Bay and the Hudson River as far north as the Tappan Zee Bridge. Government officials, the private sector and the press had a firsthand view of water quality progress, some environmental problems and many recreational/commercial assets of the region.

Since 1981, the Commission has been involved with the U.S. Army Corps of Engineers' Dredged Material Disposal Management Plan for the Port of New York and New Jersey. A report by the Corps, a compendium of alternatives and a comprehensive bibliography, was published in December 1989. Since September 1987, a

staff member has been serving as chairman of the Public Involvement Coordination Group.

Since October 1988, a member of the staff has been participating on U.S. EPA's technical review group in order to develop an environmental impact statement on the designation of an Alternate Mud Dump Site.

The laboratory is certified by New York State and New Jersey and has continued to participate in the U.S. EPA Water Pollution Laboratory Evaluation Program and Water Supply Microbiology Performance Evaluation Study. The ISC laboratory also conforms with all recommended procedures of the U.S. Food and Drug Administration.

The library has proved to be a complete and accessible regional depository of water quality related subjects. Its up-to-date as well as historical holdings have been sought out and made available to the academic community (grade school to graduate levels), consulting engineering firms, and environmental and public awareness groups, as well as government agencies across the nation.

AIR POLLUTION

ISC activities in air pollution have been drastically reduced because of budget restrictions.

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.

ISC coordinated the Ozone Health Message System to alert the public of unhealthy ambient air conditions. It was designated to provide the region with a single source of precautionary advice on ozone from May to September.

During the 12 months from October 1989 through September 1990, the Commission received 247 air pollution complaints -- a decrease of 60% over the previous 12-month period. The vast majority of calls came from Staten Island residents. Unfortunately, the Commission was forced to lay off its entire air pollution field staff and close the Staten Island field office; the 24-hour-a-day answering service has been maintained and as many complaints as are possible are investigated. ISC also forwards complaints to the appropriate enforcement agencies.

II. WATER POLLUTION

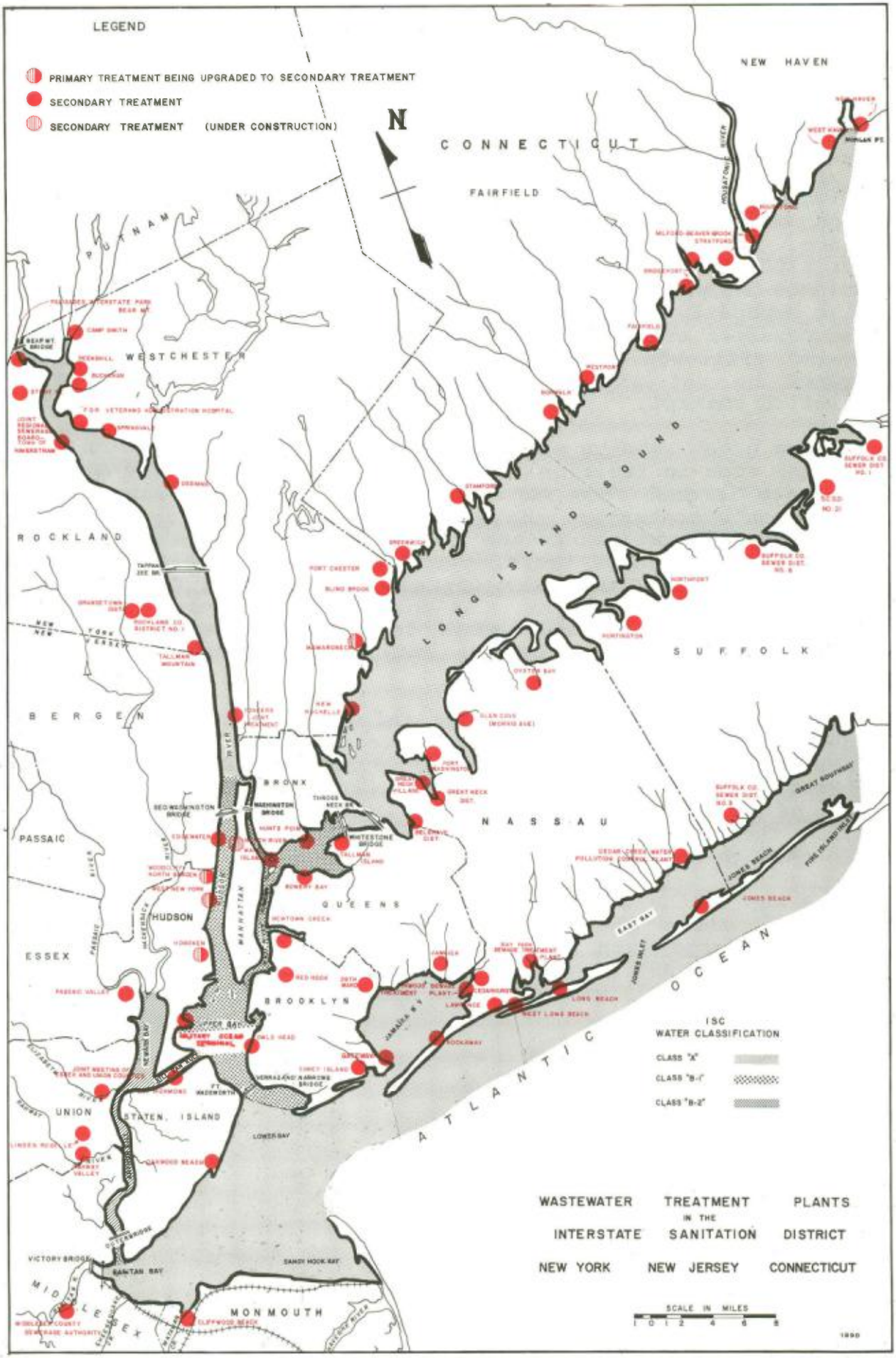
GENERAL

During 1990, over $6 billion was allocated for 123 water pollution control projects in the Interstate Sanitation District which were either completed, in progress, or planned for the future. These monies were allocated in the following manner: over $208 million for 22 completed projects, $4.1 billion for 62 projects in progress, and $1.8 billion for 39 future projects. These expenditures are being used for constructing new facilities and upgrading existing facilities in order to provide adequately treated effluents for discharge into District waters. These figures do not include the monies spent by industries for pollution control.

The great amounts of expenditures for water pollution abatement has come to fruition this past year throughout the District, yet there is much room for improvement. It has always been the Commission's contention that receiving water quality can be improved or at least maintained if the infrastructure is in place. During the past three years, thirteen primary facilities regionwide (11 in 1990) have been upgraded or diverted flows to a regional plant for treatment. As universal secondary treatment is attained, one of the next goals is the elimination of combined sewer overflows (CSOs) or the amelioration of the effects of CSOs.

The Commission obtained the information on water pollution control projects presented in this section from officials in the representative state and local governmental agencies, sewerage authorities, consulting engineering firms and national depositories of water quality data and industrial/municipal effluent data. The information in this section is that which was available through November 1990.

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. Additional information on each plant is listed in Appendix A.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SECONDARY TREATMENT (UNDER CONSTRUCTION)
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QUEENS
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NASSAU
SUFFOLK
LONG ISLAND SOUND
ATLANTIC OCEAN
MONMOUTH
MIDDLESEX
HUDSON RIVER
EAST RIVER
NEWARK BAY
RARITAN BAY
LOWER BAY
SANDY HOOK BAY
JONES INLET
EAST BAY
GREAT SOUTH BAY
FIRE ISLAND INLET
ISC
WATER CLASSIFICATION
CLASS "A"
CLASS "B-1"
CLASS "B-2"
WASTEWATER TREATMENT PLANTS
IN THE
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NEW YORK NEW JERSEY CONNECTICUT
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CONNECTICUT WATER POLLUTION CONTROL PLANTS

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

Future Projects

Both of these facilities are operating under State Consent Orders to improve plant performance and attain secondary treatment facilities.

Nearly $24 million is proposed to expand and rehabilitate the East Side plant; construction will start in January 1991. The work would include rehabilitation of the preliminary, primary, and secondary treatment units, and electrical and mechanical equipment, as well as pumps and instrumentation. The East Side plant will be expanded to 10 MGD. The West Side plant will have the same construction agenda, but will be expanded to 30 MGD at a cost of $27.6 million.

It is proposed that both plants share sludge disposal facilities which will cost $22,400,000. Sludge processing will be sited at the East Side plant.

Proposed drainage basin improvements are going to address a massive reduction of combined sewer overflows. The project will eliminate 40 CSOs; the 19 remaining CSOs will be monitored by a remote telemetering system. A construction start-up date has been set for January 1991, with costs estimated at approximately $27 million.

Greenwich, Connecticut (Fairfield County)

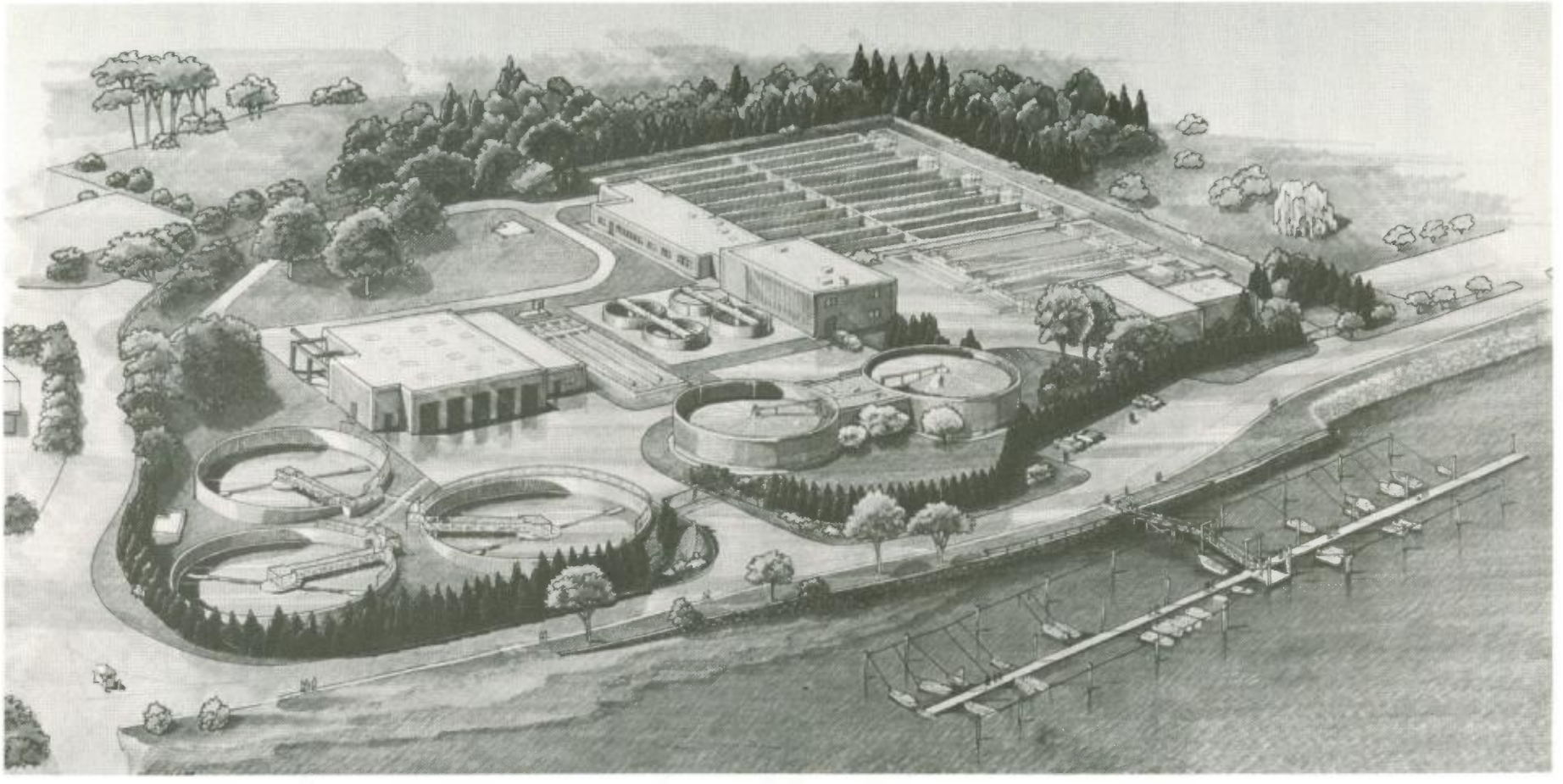
Project in Progress

This facility is presently operating under a State Administrative Order to increase treatment capacity. It is proposed that a plant expansion to 12.5 MGD and rehabilitative work be undertaken. A construction start-up date has been set for July 1990, and operations to start by November 1992. Costs have been estimated to be $33 million.

Milford - Housatonic, Connecticut (New Haven County)

Project in Progress

An engineering study is 97% complete to determine the economic feasibility of replacing a gravity sanitary sewer.



Conceptual Final Plan
Greenwich Water Pollution Control Plant
Fairfield County, Connecticut
Architectural Rendition Courtesy of
Gannet Fleming
Environmental Engineers, Inc.

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

Projects in Progress

Final sludge handling is being processed by a private contractor off site for ultimate disposal. Incinerator facilities are temporarily shut down for modifications and upgrading in order to comply with air quality compliance regulations.

Sewer separation construction has been ongoing since 1989 and will continue until the entire drainage basin eliminates combined sewers. An estimated completion date has been set for 2010.

Future Project

An estimate of $3.6 million has been proposed for the installation of a third primary basin as well as modifications to the existing primary and secondary clarifier basins. Construction start-up dates have not yet been determined.

Norwalk, Connecticut (Fairfield County)

Projects in Progress

This plant is operating under a State Consent Order to attain secondary treatment levels by January 15, 1991. Several engineering studies are underway which are addressing I/I and facility upgrades.

Expenditures of $1.5 million are estimated for all collection system improvements and rehabilitation. Sewer separation work is ongoing.

Future Project

Within the next several years a sludge incinerator will be built that has an estimated cost of $5,000,000.

Stamford, Connecticut (Fairfield County)

Projects in Progress

The addition of a secondary clarifier, at a re-estimated cost of $3,000,000 is currently 25% complete.

This plant is operating under a State Consent Order to investigate plant capacities and make necessary improvements. The plant is in compliance with specified Order

dates.

Stratford, Connecticut (Fairfield County)

Projects in Progress

This facility is operating under a State Consent Order issued September 1988 to evaluate and correct operating deficiencies. An evaluation for improving plant performance as well as an I/I study are underway.

West Haven, Connecticut (New Haven County)

Projects in Progress

This plant is operating under a State Consent Order to complete necessary plant rehabilitation by March 1993.

Several engineering studies are underway to address collection system renovations. All studies are scheduled to be complete by early 1991 at a cost of $75,000.

Two constant speed pumps are being installed at the primary gravity thickeners. Two additional pumps are being installed to transport sludge to the belt filter press and incinerator.

Westport, Connecticut (Fairfield County)

Project in Progress

Collection system expansion work has been ongoing for the past five years. Pump station rehabilitation and force main and interceptor repairs, as well as an average of nearly two miles of new gravity sewer installation per year, are continuing agenda items.

NEW JERSEY WATER POLLUTION CONTROL PLANTS

Aberdeen Township Municipal Utilities Authority - Cliffwood Beach, New Jersey (Monmouth County)

Future Projects

An estimated $600,000 will be needed to convert this facility to a pump station. A construction start-up date has been set for the late spring of 1992.

Approximately $2.5 million will be assessed to install force mains which will convey all wastewater flows to the Bayshore Regional Sewerage Authority for treatment. An operational start-up date is expected by December 31, 1992.

This facility is operating under federal and State Consent Orders to cease effluent discharges to Whale Creek and Raritan Bay.

Aberdeen Township Municipal Utilities Authority - River Gardens, New Jersey (Monmouth County)

Future Projects

A new pump station is planned for this site to transmit wastewater flows to the Cliffwood Beach collection system. Construction is to start in the spring of 1991 and will cost about $150,000.

By January 1992, force main installations costing $350,000 will connect the proposed River Gardens pump station to the Cliffwood Beach sewer system.

This facility is operating under federal and State Consent Orders to cease discharge of treated effluents to Matawan Creek.

Aberdeen Township Municipal Utilities Authority - Strathmore, New Jersey (Monmouth County)

Future Projects

At a cost of $1.8 million, it is planned to convert this 1.0 MGD plant to a pump station and convey all flows for treatment at the Bayshore Regional Sewerage Authority. The project is anticipated to be complete by December 31, 1992.

In order to complete collection system logistics, ap-

proximately $1.5 million will be accrued for force mains.

This facility is operating under federal and State Consent Orders to cease discharge of treated effluents to receiving waters which are outside the Interstate Sanitation District.

Bayonne, New Jersey (Hudson County)

Completed Project

On March 31, 1990, the City of Bayonne commenced diverting sewage flows to the PVSC secondary facility for treatment.

For further information, refer to the Legal Activities section of this report.

Bayshore Regional Sewerage Authority, New Jersey (Monmouth County)

Completed Project

A wastewater management plan was completed and a report issued in July; final costs amounted to $50,000.

Future Project

A $48,000,000 proposal has been prepared for facility upgrading and expansion to 16 MGD. An approximate construction start-up will be in 1992 and continue for at least five years.

Carteret, New Jersey (Middlesex County)

Completed Projects

An estimate of nearly $12 million has been made for Carteret's portion of the South Bay Project. The work involved a 3.54 MGD pump station and almost 16,000 feet of force main installation. All flows were diverted through Woodbridge for treatment at MCUA's secondary treatment plant during March 1990.

See the MCUA and Woodbridge write-ups for additional information.

Edgewater, New Jersey (Bergen County)

Completed Project

Construction expansion to a 6 MGD secondary facility was put on line on January 25, 1989. Using a pure oxygen activated sludge process, $9.041 million was the final cost which included all necessary equipment upgrades and installations.

Hoboken, New Jersey (Hudson County)

Projects in Progress

The Commission, U.S. EPA and NJDEP have Consent Orders to ensure compliance with ISC, federal and State requirements. Subsequent to negotiations among the parties, a 24 MGD secondary treatment facility is being built and is 18% complete. The new facility will incorporate trickling filters and ultraviolet disinfection. An estimate of $96 million has been made for all construction; an operational start-up date has been set for January 1993. The expanded and upgraded plant will also provide treatment for portions of Union City and Weehawken.

For further information, refer to the Legal Activities section of this report.

Hudson County Utilities Authority, New Jersey (Hudson County)

The Commission and the U.S. EPA are presently involved in litigation against the Hudson County Utilities Authority to ensure compliance with ISC and federal requirements.

For further information, refer to the Legal Activities section of this report.

Jersey City - East, New Jersey (Hudson County)

Refer to the PVSC write-up and the Legal Activities section of this report.

Jersey City - West, New Jersey (Hudson County)

Refer to the PVSC write-up and the Legal Activities section of this report

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

Projects in Progress

This facility is operating under State and federal Consent Orders to cease ocean disposal of sewage sludge by March 17 and December 31, 1991, respectively. In addition, a sewer connection ban was imposed on June 1, 1990.

A sludge dewatering facility is under construction. The $23 million project is 65% complete and scheduled to be on-line by March 1, 1991.

Kearny, New Jersey (Hudson County)

Project in Progress

This facility is operating under federal and State Consent Orders with a compliance schedule to cease discharge by May 1989. Cost estimates for all construction phases are $5.5 million. Ninety-five percent of the conversion to a pump station is complete. On November 13, 1990, all flows were diverted to the PVSC facility for treatment.

Refer to the PVSC write-up for additional information.

Linden Roselle Sewerage Authority, New Jersey (Union County)

Future Projects

In order to comply with New Jersey State statute, the Authority has established and is implementing a schedule for an alternate sludge disposal system. A proposed $14 million sludge incinerator is on the agenda which will process 14 dry tons per day. An approximate construction start-up date has been set for March 1993, with operations to start by January 1996.

Middlesex County Utilities Authority, New Jersey (Middlesex County)

Completed Projects

During 1990, the MCUA treatment plant received wastewater flows from the communities of Carteret, Old Bridge Township and Woodbridge to complete the South Bay Project. Modifications to the pump station, force main and interceptor sewers for this secondary facility were completed during 1989 at a final cost of $10.5 million.

Projects in Progress

Presently operating under a State Consent Order to cease ocean disposal of sewage sludge by March 17, 1991, MCUA is 96% complete in constructing a $36 million belt press sludge dewatering/chemical fixation system. The final product will be disposed of by several alternatives, including intermediate landfill cover.

Under another State Consent Order, a supplemental outfall is being installed at a cost of $30 million. The outfall will address peak flows over 144 MGD and is 95% complete.

The Edison pump station is being expanded from 45 MGD to 85 MGD at a cost of $2,000,000 and is 28% complete.

Future Project

At a proposed cost of $15 million, four final settling tanks will be added to this facility. The units will be online in 1992.

North Bergen Municipal Utilities Authority - Woodcliff Plant, New Jersey (Hudson County)

Project in Progress

This facility is operating under Consent Orders to upgrade to secondary treatment to meet ISC and fereral standards. A $20 million renovation, using trickling filters, is 90% complete.

For further information, refer to the Legal Activities section of this report.

Future Project

A sewer line, 1.5 miles long, is planned for the waterfront area between North Bergen and Edgewater. The $20 million project will take six months to complete and is expected to be in use by June 1992.

Old Bridge Municipal Utilities Authority, New Jersey (Middlesex County)

Completed Project

This primary facility was converted to a pump station as part of the South Bay Project. All flows were diverted by force main to MCUA on August 2, 1990.

For more information, refer to the MCUA write-up.

Passaic Valley Sewerage Commissioners, New Jersey (Essex County)

Completed Project

During the period September 1989 through November 1990, the primary treatment facilities in Bayonne, Kearny and Jersey City (East and West) diverted their wastewater flows to this regional secondary plant for treatment. The individual municipalities built their own interceptor sewers; no costs or structural modifications were incurred by PVSC.

For additional information, refer to the individual write-ups and the Legal Activities section of this report.

Project in Progress

Sludge dewatering facilities are 80% complete and are anticipated to be on-line by March 17, 1991. The $59 million project includes centrifuge dewatering, cake storage and loading as well as miscellaneous filter press improvements.

Future Project

A sludge incinerator with a capacity for 560 dry tons per day is proposed to be on-line by April 1997. The final cost estimate is $500 million.

Rahway Valley Sewerage Authority, New Jersey (Union County)

Projects in Progress

Ongoing construction at this facility includes both new units and renovations. A new lime stabilization unit is being installed at a cost of nearly $1,100,000. The installation of an electric motor driven blower will cost about $690,000. Rehabilitation of the influent screening system and secondary digester will cost about $1 million.

Future Project

Proposed agenda items include renovation of the sludge thickeners and replacement of the primary sludge pumps.

West New York, New Jersey (Hudson County)

Projects in Progress

This facility is currently operating under Consent

Orders to attain secondary treatment and meet ISC and federal requirements.

On April 1, 1990, construction began on upgrading and facility expansion to a 12.2 MGD secondary plant. Major units being installed include chlorination facilities, an outfall extension, rotary screens, secondary clarifiers, and trickling filters. Five percent of the estimated $40 million project is complete.

For further information, refer to the Legal Activities section of this report.

Woodbridge, New Jersey (Middlesex County)

Completed Project

Forty two million dollars was needed to construct a pump station with force mains to convey all sewage flows to MCUA. This plant was operating under federal and State Consent Orders to cease discharge; diversion commenced during February 1990. Decommissioning and demolition of the original 1952 facility is underway.

Refer to the MCUA write-up for more information.

NEW YORK WATER POLLUTION CONTROL PLANTS

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

Completed Projects

The Bay Park Sewage Treatment Plant is engaged in a phased construction program to enhance treatment system capabilities and modify and improve aspects of the facility that have exceeded their useful life.

Phase IIIA included the construction of two new final sedimentation tanks, an aeration tank, final screens and disinfection facilities. Retrofitting of three existing final clarifiers and the installation of fine bubble diffusers in the existing aeration tanks are also part of this contract. A total of $61.176 million was accrued for this phase.

At a final cost of $440,000 new telemetering was installed to provide information regarding the status of the sludge force main during pumping operations.

Installation of a boiler and its ancillary equipment now provides heat to the plant's anaerobic digesters while the new engine generation and plant-wide heating systems are built. A final cost of $710,000 was accrued.

At a cost of over $3.9 million an aboveground water storage tank, pump station building and associated controls are essentially complete (96%) and will improve fire protection within the plant.

Projects in Progress

A substantial portion (89%) of Phase IIIC has been completed, including the installation of four new final multi-fuel generators and supporting equipment. An extension to the existing main building to house the generators is under construction, in addition to a new diesel shop, motor control center and associated yard piping. An estimated $45.4 million will be spent.

The existing pumping station is being renovated with new pumps, controls and ancillary equipment at a cost of $7,878,000. The work is 50% complete.

The sludge thickening facility renovations (46% complete) and the digester gas storage rehabilitation (56% com-

plete) will cost almost $11.2 million and nearly $700,000, respectively.

Future Projects

Additions and modifications to the primary treatment facilities are anticipated to begin during December 1990. Four new primary sedimentation tanks as well as the renovation of existing tanks are on the agenda. Also, a new odor control system will be installed at an estimated cost of $25,000,000.

Sludge dewatering and pelletizing facilities are planned at an anticipated cost of over $61 million.

An estimate of $25,000,000 has been made for a new multi-fuel boiler system in conjunction with improvements to the HVAC and electrical shops. A new plant administration center will also be constructed within the existing main building. Full scale design work will begin in 1991.

Blind Brook, New York (Westchester County)

Future Project

At an estimated cost of $115,000 the disinfection equipment will be modified to use sodium hypochlorite in lieu of chlorine gas.

Bowery Bay, New York (Queens County)

Projects in Progress

A City-wide CSO abatement program is well underway. The first phase identified the extent to which CSOs result in contravention of water quality standards. The second phase consists of facilities planning involving the entire area of New York City, which has been divided into four major geographical areas of concern. The ultimate goals of the program are the removal of floatable and settleable materials in the ambient waterways, and the achievement of State standards for dissolved oxygen and coliform bacteria densities. These programs are being conducted in accordance with SPDES permit requirements.

A total of $1.5 billion has been committed for the next 10 years of the program,. Ongoing solutions to the problem have been initiated. Structural and nonstructural alternatives of eliminating floatables and untreated overflows are being considered.

Future Project

A $76.8 million sludge dewatering facility is planned for this drainage basin.

Buchanan, New York (Westchester County)

Completed Project

New mechanical aerators and sludge collection equipment were installed at a cost of $315,000.

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

Completed Project

All facilities design work for present and future expansion and rehabilitation has been completed at a cost of $4,100,000. Phased construction contract commitments are expected to be met by 1992.

Project in Progress

Seventy percent of the expanded sludge treatment facilities is complete. An increase to a 56 MGD process is planned to be operational by March 1991 at an estimated cost of $120 million.

Future Projects

A total of $30 million is planned for the final construction phases which will increase capacity from 56 MGD to 72 MGD. Agenda items include new final effluent screens, return-activated sludge pumping facilities, primary settling tanks, plant blowers and retrofitting the aeration system. An approximate construction start-up has been set for early 1991 and operations are expected to start by late 1992.

Coney Island, New York (Kings County)

Projects in Progress

Several construction phases at this treatment facility have begun and others are well underway; combined, 60% of the work is complete. Primary settling tanks, plant maintenance, grit removal facilities, a sludge force main, an engine generator, digester facilities, thickeners, aeration facilities and a final settling tank are included in this re-estimated $365 million project.

Coney Island is operating under a State Consent Order to attain secondary treatment.

See the Bowery Bay write-up for information on the City-wide CSO project.

Future Project

An additional $140 million will be needed to complete phased construction at Coney Island. An operational start-up date has been set for 1994. These phases will provide facilities for disinfection, final settling and sludge thickening, although the treatment capacity has been reduced from 110 MGD to 100 MGD.

Great Neck, Village of, New York (Nassau County)

Completed Projects

At a final cost of $6,000 an engineering study was completed which addressed process performance improvements.

Approximately $80,000 was spent to replace grit collection equipment; the work was completed in May 1990.

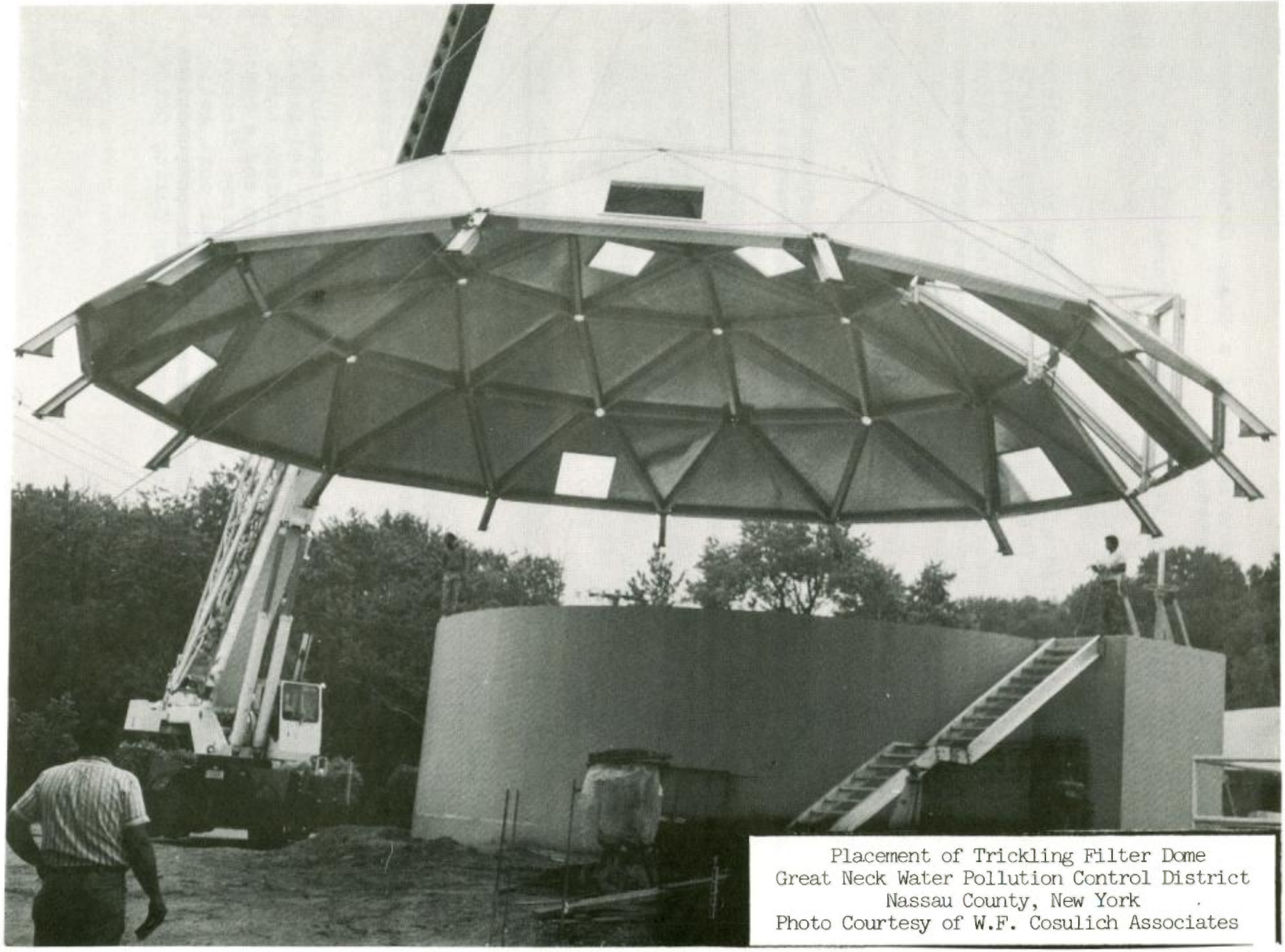
This facility is operating under a State Consent Order, initiated May 22, 1990, to investigate and correct violations of SPDES effluent limitations. A compliance schedule was included with the aforementioned engineering report submitted on September 30, 1990.

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

Completed Projects

Collection system construction is essentially complete (98%). Nearly $5.7 million was assessed to rehabilitate three pumping stations and replace force main and gravity sewers.

Upgrading and expansion to 3.8 MGD is 98% complete. The expansion work includes new headworks, primary and final settling tanks, a new trickling filter, a gas storage tank, a chlorine contact tank, an effluent pump station and a combined outfall for the Great Neck Water Pollution Control District and the Village of Great Neck. A final cost estimate is $16 million. New plant operations, in conjunction with the collection system improvements, began during October 1990.



Placement of Trickling Filter Dome
Great Neck Water Pollution Control District
Nassau County, New York
Photo Courtesy of W.F. Cosulich Associates

Huntington Sewer District, New York (Suffolk County)

Project in Progress

An engineering study is currently being reviewed to select alternatives for sludge disposal.

Hunts Point, New York (Bronx County)

Projects in Progress

A sludge dewatering facility is under construction and is to be on-line by December 1991 at an estimated cost of $147 million.

See the Bowery Bay write-up for information on the City-wide CSO project.

Future Project

Rehabilitation of various treatment units is estimated to cost $23 million. A start-up date for construction is not presently available.

Jamaica, New York (Queens County)

Projects in Progress

Sludge dewatering facilities are under construction with an anticipated cost of almost $79 million. Processing is planned to begin during December 1991.

See the Bowery Bay write-up for information on the City-wide CSO project.

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

Completed Project

Fifty thousand dollars was spent to perform grit chamber and tricking filter renovations.

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

Completed Project

Expansion and upgrading of this 6.4 MGD secondary trickling filter plant to 7.5 MGD is complete. The re-estimated $9 million project became operational on Novem-

ber 1,1989.

Projects in Progress

This plant is operating under federal and State Consent Orders to attain secondary treatment levels.

An engineering study is presently underway to address sludge composting capacity.

Future Projects

An estimate of $3 million has been made to upgrade three lift stations.

Construction start-up dates and cost estimates are still to be determined for a compost/dewatering system.

Mamaroneck, New York (Westchester County)

Projects in Progress

Construction upgrading and expansion to a 20 MGD secondary activated sludge plant is 38% complete. This project has been re-estimated to cost $105 million.

An additional $26 million is anticipated for the land/water phases to install a new outfall discharging to Long Island Sound; the outfall went on-line during June 1990.

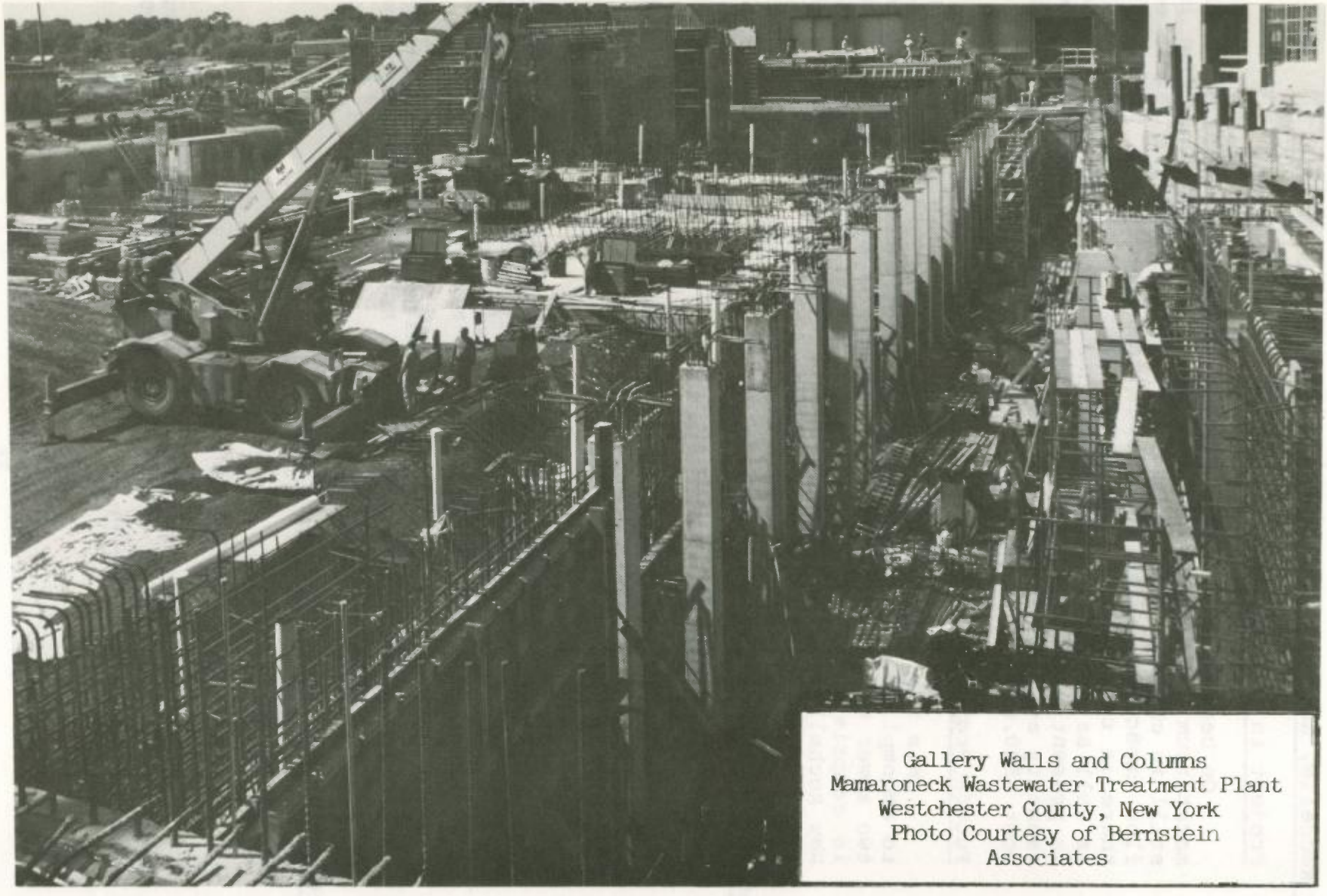
Presently, this facility is operating under a State Consent Order to attain secondary treatment levels. The Municipal Compliance Plan specifies obtaining operational levels by June 1, 1993.

See the New Rochelle write-up for additional information.

Mount Loretto Homes, New York (Richmond County)

Project in Progress

At the present time, this septic system consists of three holding tanks servicing about 1,000 people. Construction is underway to hook up to the New York City sewer system in the Oakwood Beach drainage basin.



Gallery Walls and Columns
Mamaroneck Wastewater Treatment Plant
Westchester County, New York
Photo Courtesy of Bernstein
Associates

New Rochelle, New York (Westchester County)

Project in Progress

On December 12, 1986, NYS DEC imposed a sewer extension moratorium on the New Rochelle Sewer District; this ban is still in effect. This plant meets or exceeds the permitted flow capacity. With anticipated development in the area, there is concern that the plant capacity will be exceeded, as well as effluent requirements not being met. This issue is presently being addressed. A comprehensive study of flow capacity and I/I reduction is 50% complete. This work will cost $500,000.

Future Project

This facility is operating under a State Consent Order to accomplish collection system rehabilitation and eliminate two sewer overflows. The New Rochelle Sewer District, which is comprised of Larchmont; a small section of Mamaroneck; New Rochelle and Pelham Manor, anticipates a cost of $1 million for all construction phases.

Newtown Creek, New York (Kings County)

Project in Progress

See the Bowery Bay write-up for information on the City-wide CSO project.

Future Projects

Upgrading construction will incorporate a secondary treatment system utilizing step aeration with a reduced contact time. Construction is expected to begin by November 1991 with costs estimated to be $100 million.

Approval has recently been received from NYS DEC - Region 2 to expand this plant from 310 MGD to 360 MGD with operations to begin by October 1999.

Northport, New York (Suffolk County)

Projects in Progress

An I/I study is 50% complete.

This drainage basin has a State-imposed sewer hookup moratorium in effect until flow treatment capacity meets SPDES permit limitations.

Future Project

A new pumping station is planned; construction is anticipated to begin during January 1991.

North River, New York (New York County)

Projects in Progress

This plant is presently providing primary treatment and disinfection. By February 1991, approximately 85 MGD will receive secondary treatment. The North River facility, all construction phases inclusive, has a final cost of $953 million. North River is operating under federal and State Consent Orders. The project is on schedule and is in compliance with all Order dates.

The 28 acre rooftop Riverbank State Park will provide a variety of recreational facilities and is scheduled to open by 1994. Presently, the second of three phases is underway. All structures are planned to be completed by 1992. The third phase involves landscaping. Anticipated final costs for the park will amount to $35 million.

See the Bowery Bay write-up for information on the City-wide CSO project.

Oakwood Beach, New York (Richmond County)

Projects in Progress

Construction of the Mayflower pumping station is underway. Five contracts have been awarded addressing different phases of construction and installation. A total of $15.58 million has been allocated for this project.

Construction of the West Branch Interceptor System is 40% complete. Cost are estimated to be $80 million. The Richmond Avenue pumping station foundation has been poured; work is continuing on schedule.

This facility is operating under a State Consent Order to complete all collection system projects by December 31, 1993. An interim structural plan was implemented under the conditions imposed by the Consent Order. Screening and disinfection capabilities were installed at five untreated untreated discharges at a cost of $232,000. No treatment is performed during wet weather conditions.

See the Bowery Bay write-up for information on the City-wide CSO project.

Future Project

An $86 million sludge dewatering facility is planned to be sited here. Construction is to start during the winter of 1991 and be completed by the following year.

Orangetown Sewer District, New York (Rockland County)

Projects in Progress

A sewer system evaluation survey, which is underway and will cost $942,000, is scheduled to be completed by July 1992.

Trickling filter renovations are 50% complete and will cost $1,000,000.

Future Projects

A $50,000 grant is to be awarded during November 1990 to produce an environmental impact statement.

This facility is operating under a State Consent Order to complete the aforementioned studies and upgrade and expand its capacity to 12.75 MGD. An approximate operational date has been set for 1994 and the is anticipated to cost is $7,000,000.

Ossining, New York (Westchester County)

Project in Progress

A $280,000 rehabilitation project is underway which includes the installation of new bar screens, and the refurbishing of the multiple hearth furnaces' instrumentation.

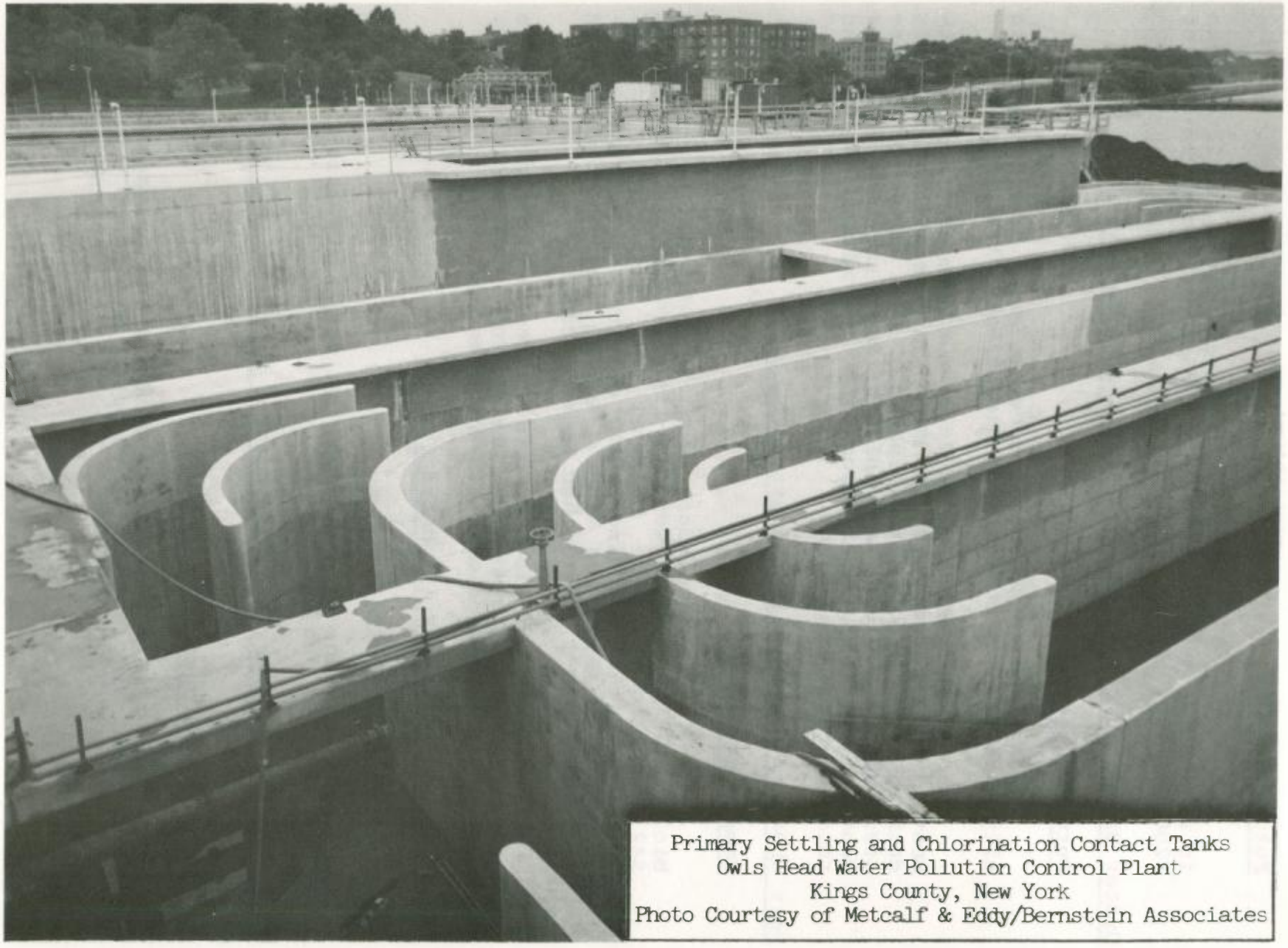
Owls Head, New York (Kings County)

Projects in Progress

A $250 million upgrade is 75% complete. Work is continuing on the digester facilities, engine generator, pump and powerhouse, outfall to Upper New York Bay, disinfection facilities, waterfront facilities for the sludge barge berthing area and primary facilities.

Owls Head is operating under a State Consent Order to attain secondary treatment levels.

See the Bowery Bay write-up for information on the City-wide CSO project.



Primary Settling and Chlorination Contact Tanks
Owls Head Water Pollution Control Plant
Kings County, New York
Photo Courtesy of Metcalf & Eddy/Bernstein Associates

Future Project

Upgrading of the primary tanks and final settling tanks is scheduled to be completed by 1995 at an estimated cost of $200,000,000.

Oyster Bay Sewer District, New York (Nassau County)

Future Projects

This plant is operating under a State Consent Order to eliminate I/I and attain secondary treatment limitations.

An estimate of $3.1 million has been made for treatment plant expansion to 1.8 MGD. An operational start-up date of June 1992 is anticipated. New units to be constructed are effluent and influent pump stations; chlorine contact, primary, and secondary clarifier tanks; and rotating biological discs.

Port Chester, New York (Westchester County)

Completed Project

A new 6 MGD secondary facility incorporating rotating biological contactors went on-line January 1, 1990. The $42.5 million project included the installation of RBC units, two final settling tanks, gravity thickeners, centrifuges, a fluidized bed sludge burning system, disinfection equipment, and a Long Island Sound outfall.

This facility is operating under a Consent Order to attain secondary treatment limitations by January 1, 1990, and is in compliance with all Order dates.

Port Richmond, New York (Richmond County)

Project in Progress

See the Bowery Bay write-up for information on the City-wide CSO project.

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

Completed Project

Collection system construction involving gravity sewer replacement and rehabilitation/modernization of two pumping stations is 100% complete. Final costs were nearly $10.5 million.

Projects in Progress

Construction is 90% complete to expand this 3 MGD secondary trickling filter plant to a capacity of 4 MGD. A final cost of nearly $17 million will provide for new primary and secondary clarifiers, a new trickling filter, a new sand filter, a new chlorine contact tank, sludge dewatering and incineration facilities, and a sewer outfall. The Municipal Compliance Plan specifies a construction completion date of December 1990.

Red Hook, New York (Kings County)

Projects in Progress

Sludge dewatering facilities are under construction. An estimated cost of $13,000,000 will be spent by the time of operation in December 1991.

This facility is operating under federal and State Consent Orders to attain secondary treatment levels and is in compliance with all Order dates.

See the Bowery Bay write-up for information on the City-wide CSO project.

Rockaway, New York (Queens County)

Project in Progress

See the Bowery Bay write-up for information on the City-wide CSO project.

Staten Island University Hospital, New York (Richmond County)

Project in Progress

Formerly known as Richmond Memorial Hospital, this facility is operating under a State Consent Order to upgrade the plant with backwash/filter and surge tanks.

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

Completed Project

An in-house flow study was conducted to investigate erroneous flow volume increases most probably attributed to excessive I/I.

Future Projects

An estimate of $500,000 was made for collection system rehabilitation. A construction start-up date is anticipated for March 1991.

This facility is operating under a State Consent Order to ensure secondary effluent limitations, complete the collection system renovations and conduct a wasteload allocation study in Port Jefferson Harbor.

Suffolk County Sewer District #3, Bergen Point, New York (Suffolk County)

Projects in Progress

Several engineering studies are 80% complete. I/I and flow status/plant stressing studies are being conducted in-house.

Approximately 75% of an equipment replacement and upgrade is complete. Final costs are estimated at $3.2 million.

This facility is operating under a State Consent Order to implement improvements and meet secondary effluent limitations. In addition, a federal Administrative Order regarding incinerator emissions is being addressed.

Phased construction renovations are ongoing throughout the plant. An estimate of $4,700,000 was made for the work which began in January 1990.

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

Future Project

As a result of completed engineering studies, a $1.6 million equipment renovation is planned. Construction is expected to start during March 1991.

Suffolk County Sewer District #21, S.U.N.Y., New York (Suffolk County)

Project in Progress

A new 2.5 MGD secondary oxidation ditch treatment facility came on-line during February 1989. This sewer district is operating under a State Consent Order to assure continued compliance and conduct a wasteload allocation

study in Port Jefferson Harbor.

Tallman Island, New York (Queens County)

Projects in Progress

Construction has begun on a $55 million dewatering facility. An operational start-up date has been set for December 1991.

See the Bowery Bay write-up for information on the City-wide CSO project.

26th Ward, New York (Kings County)

Projects in Progress

Construction has begun on sludge dewatering facilities which has an estimated cost of nearly $202,000,000.

See the Bowery Bay write-up for information on the City-wide CSO project.

Wards Island, New York (New York County)

Projects in Progress

Construction has begun on a $130,000,000 sludge dewatering facility which is to be completed by December 1991.

See the Bowery Bay write-up for information on the City-wide CSO project.

Yonkers, New York (Westchester County)

Projects in Progress

In 1989, the Commission was granted party status in an adjudicatory hearing regarding SPDES permit modifications. Refer to the Legal Activities section of this report for detailed information.

A sewer system evaluation survey (SSES) is being conducted in several of the individual municipalities in order to identify and alleviate extraneous flows. Detailed information is contained in the Legal Activities section of this report.

The first phase of a multi-phase combined sewer overflow and regulator rehabilitation project is complete. Phase One, which was completed on April 1, 1990, included swirl concentrators and disinfection at the North Yonkers

pump station. Phase Two, which involves collection system improvements, began on September 10, 1990. All phases will cost approximately $6,500,000.

A sludge dewatering facility is under construction. The facility, which is estimated to cost over $10.7 million, is expected to be operational by January 1, 1992.

This facility is operating under a Consent Order to stop ocean dumping of sewage sludge by December 31, 1991.

EFFLUENT AND AMBIENT WATER QUALITY MONITORING

During this past year, the Commission continued its monitoring programs of the District's effluent and ambient water quality, but conducted a considerably reduced number of sampling surveys. Samplings and inspections were conducted by field personnel at industrial, municipal and private wastewater treat- ment facilities, as well as two intensive survey -- one in the Hudson River and one in Raritan Bay. Commission laboratory personnel performed analyses for a wide range of parameters.

The Commission laboratory is equipped with a full range of analytical instruments, including a gas chromatograph/mass spectrophotometer. With this instrument, toxics (including the priority pollutants) are measured on samples collected in the field.

The Commission's research vessel, the R/V Natale Colosi, was used extensively on several projects including surface water quality sampling and for observations of the Fresh Kills Landfill, marine transfer stations and barges en route.

The laboratory has restaffed from its 1989 budget cuts. ISC's laboratory is certified by New York State and New Jersey and continues to participate in the U.S. EPA Water Pollution Laboratory Evaluation Program and Water Supply Microbiology Performance Evaluation Study as well as the New York State Department of Health Non-Potable Water Bacteriology Proficiency Test. In addition, the ISC laboratory also conforms with all recommended procedures of the U.S. Food and Drug Administration's National Shellfish Sanitation Program.

Investigations of private and municipal facilities involve a six-hour period of sampling and inspection of processes, equipment, and plant records; those of industrial facilities generally involve a twenty-four period or a full day's production, if less than twenty-four hours. Analyses of all appropriate parameters are carried out in the ISC laboratory. The data generated from these investigations are used to determine compliance ISC requirements and with each facility's SPDES permit.

SPECIAL INTENSIVE SURVEYS

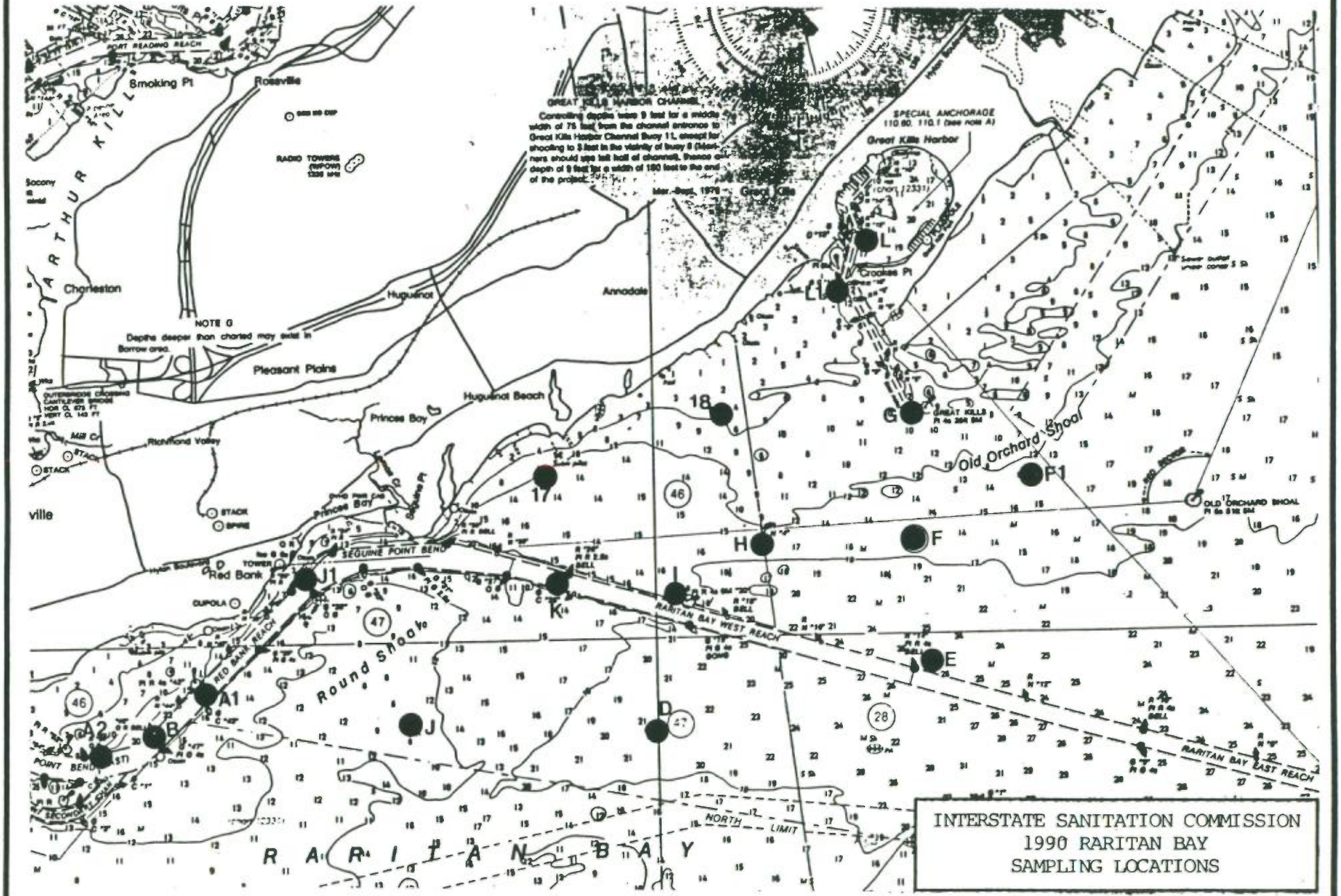
1990 Coliform Sampling in New York State Shellfish Waters in Raritan Bay

The Interstate Sanitation Commission (ISC) conducted intensive water quality surveys in Raritan Bay in March and April of 1990. The sampling was requested by the New York State Department of Environmental Conservation (NYS DEC), Bureau of Shellfisheries, to collect water quality data for fecal and total coliforms. The data were supplied to NYS DEC so they could meet the U.S. Food and Drug Administration's (U.S. FDA) coliform bacteria sampling requirement for shellfish transplanting and thus start that program as early as possible, and for comparison to the U.S. FDA's criteria for depuration harvesting of shellfish.

Raritan Bay is bordered by Staten Island in New York and Monmouth and Middlesex Counties in New Jersey. It has contiguous boundaries with the Lower New York Bay/Atlantic Ocean, Sandy Hook Bay, the Raritan River and the Arthur Kill. The water quality classification is designated by the Commission as "Class A" -- primary contact recreation and, in designated areas, shellfish harvesting. Hard clams are harvested in designated areas in both the New York and New Jersey portions of Raritan Bay. ISC's regional year-round disinfection requirement (which became effective July 1, 1986) was a major factor that enabled the New Jersey Department of Environmental Protection, in 1989, to remove the seasonal restriction on 13,000 acres in Raritan/Sandy Hook Bays for shellfish waters used for depuration harvesting. New York waters in Raritan Bay were used for depuration harvesting until 1983, when the depuration plant on Staten Island closed. Nobody has applied to NYS DEC for a permit to conduct depuration harvesting in these waters since that time.

The study consisted of ten (10) sampling trips with a total of 17 stations per trip. A total of 170 samples were taken -- each being analyzed for total and fecal coliforms for a total of 340 analyses. All surveys were conducted using the ISC research vessel, the R/V Natale Colosi. A map showing the general area of sampling and a table giving the specific sampling station descriptions are shown on the following pages.

The surveys were scheduled to collect the water samples during the worst case conditions -- on the outgoing tide and under wet weather conditions. All samples were taken during ebbing tides (at least two (2) hours after high tide at Sandy Hook, N.J.) and within 72 hours of a storm event of over 0.25 inches of rain -- criteria requested by the NYS DEC. A tabulation of pertinent climatological and tidal information for the sampling area is shown on the table.


Smoking Pt
Rossville
ARTHUR KILL
Socony
Charleston
Huguenot
Annadale
NOTE G
Depths deeper than charted may exist in Borrow area.
Pleasant Plains
Huguenot Beach
Princess Bay
Richmond Valley
Mill Cr
STACK
SPIRE
Red Bank
SEGUINE POINT BEND
RED BANK REACH
Round Shoal
RARITAN BAY WEST REACH
RARITAN BAY EAST REACH
Old Orchard Shoal
OLD ORCHARD SHOAL
Great Kills Harbor
Crookes Pt
SPECIAL ANCHORAGE
GREAT KILLS HARBOR CHANNEL
NORTH LIMIT
R A R I T A N B A Y
A1
A2
B
D
E
F
F1
G
H
I
J
J1
K
L
L1
17
18
46
47
28
INTERSTATE SANITATION COMMISSION
1990 RARITAN BAY
SAMPLING LOCATIONS

INTERSTATE SANITATION COMMISSION

STATION LOCATIONS FOR 1990 RARITAN BAY COLIFORM SAMPLING SURVEY

STATION NUMBER	LATITUDE (NORTH) D M S	LONGITUDE (WEST) D M S	DESCRIPTION
A-1	40-29-55	74-13-26	West of Daymarker "42" Fl R 4 sec
A-2	40-29-31	74-14-16	West of R "50" Q R Bell
B	40-29-36	74-13-39	East of G "47" Fl G 4 sec Bell
D	40-29-22	74-09-54	1.9 Miles East of Seguine Point
E	40-29-47	74-08-07	North of R "14" Fl R 4 sec Bell
F	40-30-35	74-08-01	0.7 Miles SE of GK Daymarker
F-1	40-30-55	74-06-59	0.8 Miles East of GK Daymarker
G	40-31-16	74-08-00	South of GK Daymarker
H	40-30-35	74-09-13	East of R "4" Nun
I	40-30-18	74-09-43	East of Daymarker "20" Fl 4 sec
J	40-29-27	74-11-28	1.3 Miles East of Red Bank
J-1	40-30-15	74-12-30	West of G "35" Q G
K	40-30-23	74-10-20	South of R "26" Fl R Bell
L	40-32-29	74-08-25	South of R "12" Nun
L-1	40-32-11	74-08-31	South of R "10" Nun
17	40-30-58	74-10-37	0.2 Miles East of Huguenot Beach
18	40-31-25	74-09-27	0.3 Miles East of Annadale

INTERSTATE SANITATION COMMISSION

CLIMATOLOGICAL AND TIDAL INFORMATION FOR 1990 RARITAN BAY

COLIFORM SAMPLING SURVEY

DATE	HIGH TIDE AT SANDY HOOK, NJ (LOCAL TIME)	RAINFALL AT CENTRAL PARK, NY DURING THE PREVIOUS 24 HOURS	48 HOURS	72 HOURS
03-20-90	0133	0.00	0.00	0.58
03-21-90	0237	0.81	0.81	0.81
03-22-90	0348	T	0.81	0.81
04-04-90	0403	1.00	1.00	1.01
04-05-90	0509	T	1.00	1.00
04-06-90	0607	0.00	T	1.00
04-16-90	1235	1.33	1.43	1.43
04-17-90	1331	0.00	1.33	1.43
04-18-90	0154	0.05	0.05	1.38
04-30-90	1315	0.28	0.28	0.28

Rainfall is in inches; T = Trace

On the last four (4) sampling runs, water temperatures were measured, as requested by NYS DEC. These data were needed because of the U.S. FDA requirement that the waters from which shellfish are harvested for transplanting (as well as the waters to which they are transplanted) must be a minimum of 50 degrees Fahrenheit (10 degrees Centigrade).

The sampling protocol and analysis procedure was in conformance with Section B of the National Shellfish Sanitation Program (NSSP) Operations Manual (1986). A 3-tube, 4-dilution MPN test was used to yield the range of values required (MPNs from < 3 to > 24000). All samples were taken three (3) feet below the surface of the water. The National Shellfish Sanitation Program coliform limitations are given on the table on the following page. The results from each sampling run are available at the Commission offices.

All data collected were supplied to the NYS DEC. These data, supplemented by data previously collected by ISC and NYS DEC, enabled NYS DEC to open 12,000 acres in Raritan Bay in mid-May 1990, for transplant harvesting of hard clams. Approximately 50% of the area sampled -- generally the easternmost portion -- also met the criteria for depuration.

1990 Coliform Sampling in the Hudson River to Determine the Feasibility of Swimming

In 1986, the Interstate Sanitation Commission (ISC) and the environmental departments of the States of New York and New Jersey upgraded the portion of the Hudson River from its confluence with the Harlem River north to the New York/New Jersey border to "swimmable/fishable" -- ISC Classification "A". Several of the beach sites in and north of the upgraded portion of the Hudson River have been closed for swimming for many years due to high coliform bacteria densities and aesthetic blight. During the summer of 1987, the Commission conducted a limited coliform survey at 10 sites in the upgraded portion of the Hudson River and found the results encouraging.

During the summer of 1988, the ISC conducted a coliform survey at 16 stations in the Hudson River from just south of the upgraded portion to Iona Island near Bear Mountain. Prior to conducting the survey, the agencies responsible for opening swimming areas were contacted for the necessary sampling protocols and for suggested sampling locations. Those agencies were the State environmental and health departments in New York and New Jersey, the health departments in Westchester County and in New York City, and the Palisades Interstate Park Commission. The 16 sampling stations were located along the west and east shores of the Hudson River. A map and listing of the station locations are shown on the following pages. The samples were taken at the

NATIONAL SHELLFISH SANITATION PROGRAM

COLIFORM REQUIREMENTS

Direct Harvesting

One of the following standards shall be met:

The total coliform median or geometric mean MPN of the water does not exceed 70 per 100 ml and not more than 10 percent of the samples exceed an MPN of 230 per 100 ml for a 5-tube decimal dilution test (or an MPN of 330 per 100 ml for a 3-tube decimal dilution test).

OR

The fecal coliform median or geometric mean MPN of the water does not exceed 14 per 100 ml and not more than 10 percent of the samples exceed an MPN of 43 per 100 ml for a 5-tube decimal dilution test (or an MPN of 49 per 100 ml for a 3-tube decimal dilution test).

Depuration

One of the following standards shall be met:

The total coliform median or geometric mean MPN of the water does not exceed 700 per 100 ml and not more than 10 percent of the samples exceed an MPN of 2,300 per 100 ml for a 5-tube decimal dilution test (or an MPN of 3,300 per 100 ml for a 3-tube decimal dilution test).

OR

The fecal coliform median or geometric mean MPN of the water does not exceed 88 per 100 ml and not more than 10 percent of the samples exceed an MPN of 260 per 100 ml for a 5-tube decimal dilution test (or an MPN of 300 per 100 ml for a 3-tube decimal dilution test).

shoreline from marinas, waterfront parks and beaches. The results of the 1988 survey indicated that some portions of the Hudson River could possibly be reopened for swimming.

During the summer of 1990, the Commission conducted another coliform sampling survey at the same stations sampled in 1988. Fecal and total coliform data were collected for comparison to the swimming criteria of the States of New York and New Jersey.

Samples for fecal and total coliforms were taken at all stations 10 times during a 30-day period. The 30-day period is derived from both the New Jersey and New York coliform criteria for bathing beaches (see table on following page). Fecal and total coliform analyses were run using the 5-tube, 3-dilution MPN test using dilutions to yield resulting MPNs in the range of <20 to ≥ 24000 per 100 ml.

A summary of the results of the 1990 coliform sampling is shown on the table on the following page. Only two stations met the swimming criteria for fecal coliforms -- Station 5 at Hook Mountain State Park and Station 11 at Croton Point Park. Many of the other stations were not far above the fecal coliform criteria of ≤ 200/100 ml for the geometric mean. However, the three stations in New Jersey also failed to meet that State's requirement that no more than 10 percent of the samples taken in a 30-day period can exceed a value of 400/100 ml for fecal coliforms.

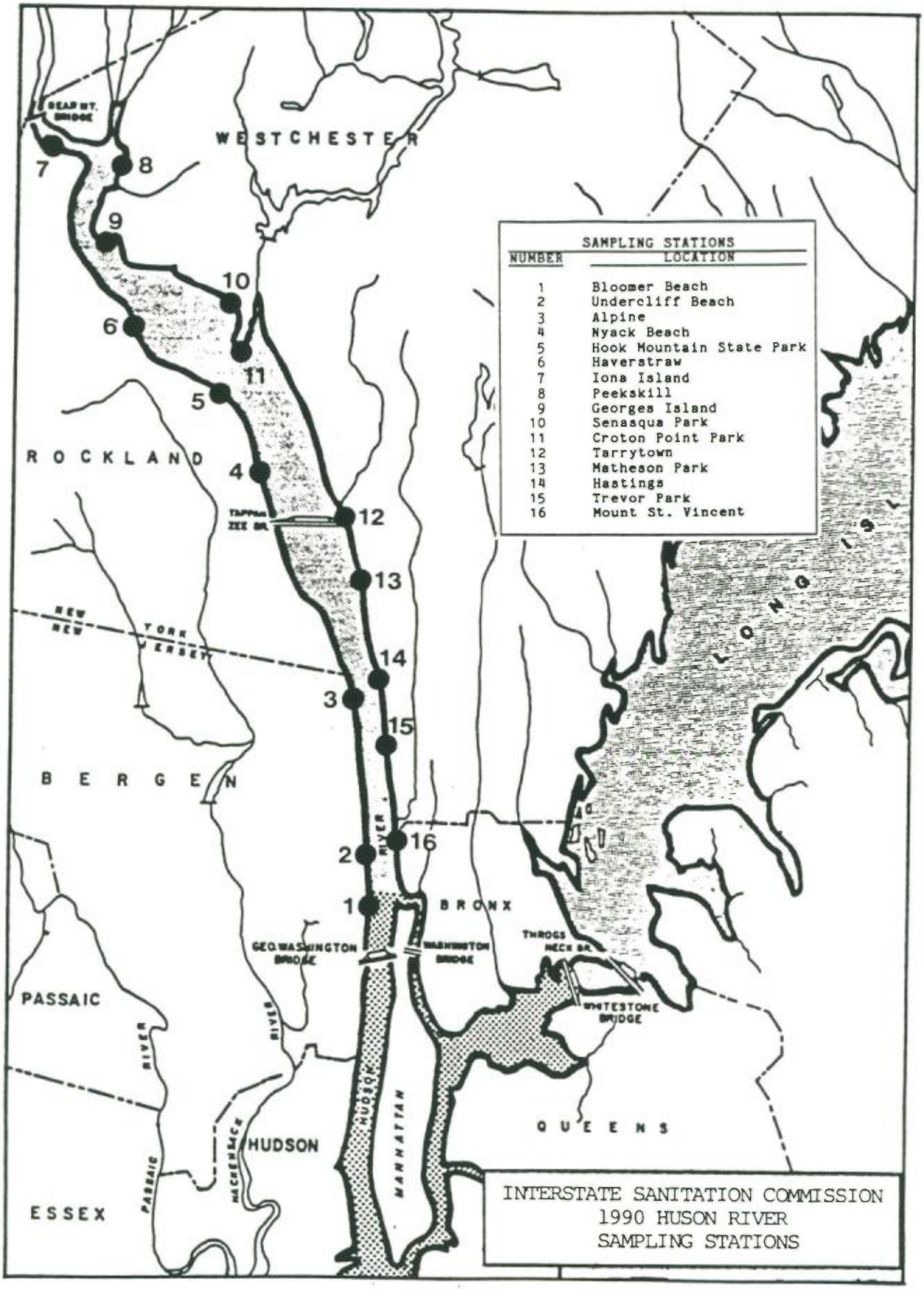
The requirement for total coliforms applies only to New York waters. Seven stations in New York met both criteria for total coliforms -- that is, the geometric mean was $\leq 2,400$/100 ml and less than 20 percent of the samples exceeded 5,000/100 ml. Two of the other stations met the criteria for the geometric mean but exceeded the criteria for the percent of samples exceeding a value of 5,000/100 ml.

A comparison of the 1988 and 1990 coliform sampling results is shown on the table on the following page. Although the values are in the same general range, the sampling results for 1990 are somewhat higher than those obtained in 1988 -- especially when compared to the fecal coliform requirement for swimming.

A comparison was made of the rainfall prior to the sampling dates in 1988 and in 1990. In the 24 hours prior to the sampling dates in 1990, the rainfall totaled 4.49 inches; for the comparable period in 1988, the rainfall totaled only 1.69 inches. Similarly higher rainfalls were recorded in 1990 compared to 1988 for the 48-hour (8.04 inches in 1990 versus 4.35 inches in 1988) and 72-hour (9.22 inches in 1990 versus 4.60 inches in 1988) periods prior to sampling.

The higher rainfalls recorded in 1990 versus those recorded

in 1988 lead to greater spillage of raw sewage (with no disinfection) from combined sewer outfalls (CSOs) and nonpoint source runoff. This most likely accounts for the somewhat higher coliform values in 1990 versus 1988 and points out the need for controlling CSOs during wet weather. Although some areas in the Hudson River can possibly be opened for swimming, it is not likely that all or most of the areas can be opened for swimming until CSOs are controlled to the extent that they will not cause water quality standards to be contravened.


WESTCHESTER
ROCKLAND
BERGEN
PASSAIC
ESSEX
HUDSON
BRONX
QUEENS
LONG ISL
NEW YORK
NEW JERSEY
HUDSON RIVER
MANHATTAN
PASSAIC RIVER
HACKENSACK RIVER
GEO. WASHINGTON BRIDGE
WASHINGTON BRIDGE
THROGS NECK BR.
WHITESTONE BRIDGE
BEAR MT. BRIDGE
TAPPAN ZEE BR.
SAMPLING STATIONS
NUMBER LOCATION
1 Bloomer Beach
2 Undercliff Beach
3 Alpine
4 Nyack Beach
5 Hook Mountain State Park
6 Haverstraw
7 Iona Island
8 Peekskill
9 Georges Island
10 Senasqua Park
11 Croton Point Park
12 Tarrytown
13 Matheson Park
14 Hastings
15 Trevor Park
16 Mount St. Vincent
INTERSTATE SANITATION COMMISSION
1990 HUSON RIVER
SAMPLING STATIONS

INTERSTATE SANITATION COMMISSION

1990 HUDSON RIVER COLIFORM SAMPLING STATION LOCATIONS

Station Number	Bank of Hudson River	Station Location (City, County, State)	Station Description
1	West	Englewood Cliffs, Bergen County, NJ	Bloomer Beach
2	West	Englewood Cliffs, Bergen County, NJ	Undercliff Beach
3	West	Alpine, Bergen County, NJ	Alpine Boat Basin
4	West	Upper Nyack, Rockland, County, NY	Nyack Beach
5	West	Congers, Rockland County, NY	Hook Mountain State Park
6	West	Haverstraw, Rockland County, NY	Foot of Main Street
7	West	Stony Point, Rockland County, NY	Iona Island Bird Sanctuary
8	East	Peekskill, Westchester County, NY	Riverfront Green
9	East	Cortlandt, Westchester County, NY	George's Island Park
10	East	Croton-on Hudson, Westchester County, NY	Senasqua Park
11	East	Croton-on-Hudson, Westchester County, NY	Croton Point Park
12	East	Tarrytown, Westchester County, NY	Tarrytown Boat Club
13	East	Irvington, Westchester County, NY	Matheson Park
14	East	Hastings-on-Hudson, Westchester County, NY	Hastings Boat Club
15	East	Yonkers, Westchester County, NY	Trevor Park
16	East	New York City, Bronx County, NY	Mount Saint Vincent College

COLIFORM STANDARDS FOR BATHING BEACHES

NEW JERSEY

Fecal coliform levels shall not exceed a geometric average of 200/100 ml nor should 10 percent of the total samples taken during any 30-day period exceed 400/100 ml.

NEW YORK

The total number of organisms of the coliform group shall not exceed a logarithmic mean of 2400/100 ml for a series of 5 or more samples in any 30-day period, nor shall 20 percent of total samples during the period exceed 5000/100 ml.

The fecal coliform density from at least five successive sets of samples collected daily on five different representative days shall not exceed a logarithmic mean of 200/100 ml.

INTERSTATE SANITATION COMMISSION

1990 COLIFORM SAMPLING RESULTS

IN THE HUDSON RIVER

SUMMARY OF RESULTS

	FECAL COLIFORMS			TOTAL COLIFORMS		
STATION	GEOMETRIC MEAN (1)	% OF VALUES EXCEEDING 400/100 ml (2)	MEETING SWIMMING CRITERIA	GEOMETRIC MEAN (3)	% OF VALUES EXCEEDING 5000/100 ml (4)	MEETING SWIMMING CRITERIA
1	540	50	No	990	--	---
2	490	60	No	≥1,300	--	---
3	<160	20	No	900	--	---
4	<210	--	No	740	10	Yes
5	<150	--	Yes	520	0	Yes
6	<300	--	No	980	20	No
7	<240	--	No	610	0	Yes
8	≥2,600	--	No	≥4,900	50	No
9	<240	--	No	730	0	Yes
10	>810	--	No	≥1,800	40	No
11	<93	--	Yes	290	0	Yes
12	≥4,600	--	No	≥9,300	80	No
13	<320	--	No	790	10	Yes
14	<520	--	No	1,200	10	Yes
15	≥1,300	--	No	≥3,400	50	No
16	≥1,600	--	No	≥3,900	40	No

Notes: (1) Criterion of ≤200/100 ml applicable in NY and NJ waters
(2) Criterion of ≤10 % applicable in NJ waters
(3) Criterion of ≤2,400/100 ml applicable in NY waters
(4) Criterion of <20 % applicable in NY waters

INTERSTATE SANITATION COMMISSION

COMPARISON OF 1988 AND 1990 COLIFORM SAMPLING RESULTS

IN THE HUDSON RIVER

		FECAL COLIFORMS			TOTAL COLIFORMS		
STATION		GEOMETRIC MEAN (1)	% OF VALUES EXCEEDING 400/100 ml (2)	MEETING SWIMMING CRITERIA	GEOMETRIC MEAN (2)	% OF VALUES EXCEEDING 5000/100 ml (4)	MEETING SWIMMING CRITERIA
1	1988	<170	30	No	820	--	---
	1990	540	50	No	990	--	---
2	1988	200	30	No	800	--	---
	1990	490	60	No	≥1,300	--	---
3	1988	<76	20	No	830	--	---
	1990	<160	20	No	900	--	---
4	1988	<44	--	Yes	510	0	Yes
	1990	<210	--	No	740	10	Yes
5	1988	<80	--	Yes	500	0	Yes
	1990	<150	--	Yes	520	0	Yes
6	1988	200	--	Yes	1,200	10	Yes
	1990	<300	--	No	980	20	No
7	1988	73	--	Yes	830	10	Yes
	1990	<240	--	No	610	0	Yes
8	1988	≥7,300	--	No	≥14,000	80	No
	1990	≥2,600	--	No	≥4,900	50	No
9	1988	<56	--	Yes	430	0	Yes
	1990	<240	--	No	730	0	Yes
10	1988	<67	--	Yes	450	10	Yes
	1990	>810	--	No	≥1,800	40	No
11	1988	<38	--	Yes	280	0	Yes
	1990	<93	--	Yes	290	0	Yes
12	1988	<150	--	Yes	770	20	No
	1990	>4,600	--	No	≥9,300	80	No
13	1988	<160	--	Yes	800	10	Yes
	1990	<320	--	No	790	10	Yes
14	1988	<100	--	Yes	630	10	Yes
	1990	<520	--	No	1,200	10	Yes
15	1988	<330	--	No	≥1,300	10	Yes
	1990	≥1,300	--	No	≥3,400	50	No
16	1988	120	--	Yes	≥2,700	30	No
	1990	≥1,600	--	No	≥3,900	40	No

Notes: (1) Criterion of ≤200/100 ml applicable in NY and NJ waters
(2) Criterion of ≤10 % applicable in NJ waters
(3) Criterion of ≤2,400/100 ml applicable in NY waters
(4) Criterion of <20 % applicable in NY waters

BOAT INSPECTION TRIP

A boat inspection trip was held on August 9, in a portion of the Interstate Sanitation District: Lower New York Bay, Raritan Bay, Arthur Kill/Kill Van Kull, Upper New York Bay, and the Hudson River as far north as the Tappan Zee Bridge. The map on the following page shows the six-hour route which was traversed. The waters inspected during the trip provide for recreational powerboating and sailing; the use of canoes, kayaks and sculls; and a major sea-lane for the eastern seaboard. Other primary contact activities supported by these waters include commercial and recreational fishing, shellfishing, scuba diving, swimming, water skiing, and wind surfing.

ISC Commissioners, officials from all levels of government, citizen groups, and the press viewed bathing beaches and seaside parks, commercial shellfish operations, numerous party boats and small recreational vessels, urban industries, historical landmarks, proposed dredge sites and waterfront development projects. A running dialogue of water quality issues, sights and points of interest was provided throughout the trip.

In Raritan Bay, recreational and party boats were observed seeking fluke, bluefish and sea bass. While traversing the New York portion of Raritan Bay, commercial clammers were seen harvesting hard clams.

Six major oil spills occurred in the Arthur Kill and Kill Van Kull from January through July of 1990. On the inspection trip, oil recovery operations were observed, such as containment booms and cleanup equipment.

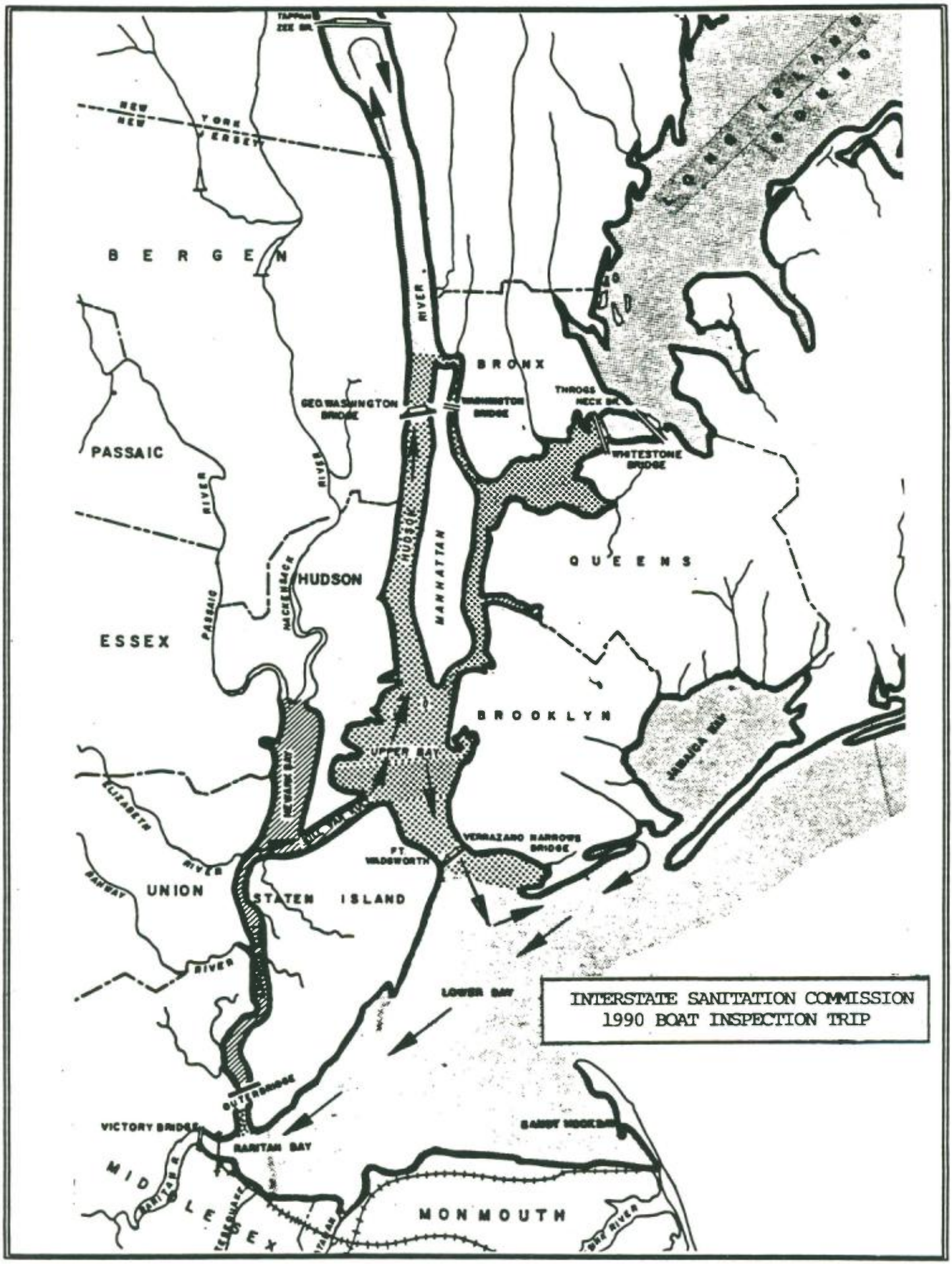
Throughout the trip, debris was observed in the water and along the shorelines. In Upper New York Bay, a U.S. Army Corps of Engineers' catamaran was seen collecting floatables (wood, plastic, etc.).

The attendees viewed the ongoing waterfront development, sewage treatment plants, electrical generating stations, marine transfer stations (for municipal solid waste), cruise ships and commercial vessels unloading their cargo.

The Fresh Kills Landfill, the world's largest landfill, was seen on the Arthur Kill shoreline of Staten Island.

Attendees had the opportunity to see several historical sites including the Statue of Liberty and the majestic Palisades.

The inspection trip gave the attendees a firsthand view of the progress that has been made and some of the problems that must be addressed in the region.


BERGEN
PASSAIC
ESSEX
HUDSON
UNION
BRONX
QUEENS
BROOKLYN
STATEN ISLAND
MONMOUTH
MIDDLESEX
HUDSON RIVER
MANHATTAN
GEO WASHINGTON BRIDGE
WHITESTONE BRIDGE
VERRAZANO NARROWS BRIDGE
FT WADSWORTH
UPPER BAY
LOWER BAY
RARITAN BAY
VICTORY BRIDGE
NEWARK BAY
PASSAIC RIVER
HACKENSACK RIVER
ELIZABETH RIVER
RARITAN RIVER
SANDY HOOK BAY
SHREWSBURY RIVER
NEW YORK
NEW JERSEY
INTERSTATE SANITATION COMMISSION
1990 BOAT INSPECTION TRIP

NATIONAL ESTUARY PROGRAM

The National Estuary Program (NEP) was established in 1984 to provide assistance to estuaries of national significance that are threatened by pollution, development or overuse. The NEP provides a 5-year federal assistance program to develop a Comprehensive Conservation and Management Plan (CCMP) for designated estuaries. The Long Island Sound has been receiving funding under this program since 1985 and was officially designated as an estuary of national significance in 1988. The New York-New Jersey Harbor Estuary also received this designation in 1988 and will be funded until 1993. The overall coordination for the Long Island Sound Estuary Study is being carried out by the U.S. EPA Regions I and II. The New York-New Jersey Estuary Program is being coordinated by the U.S. EPA Region II.

The Interstate Sanitation Commission has played an active role in both studies as a member of the Management Committees and various work groups. ISC has also performed several tasks for the Long Island Sound Estuary Study.

Long Island Sound Estuary Study

During this past year, the Long Island Sound Estuary Study has focused on developing a preliminary report on hypoxia -- because data gathered over the past few summers has shown a widespread area of low dissolved oxygen in the western portion of the Sound, with some values as low as 0.0 mg/l of dissolved oxygen (DO). To date, the study has identified nitrogen as the limiting factor for the low DO values and has recommended that interim measures be taken until the study is complete. These measures include capping nitrogen discharges from sewage treatment plants (STPs) at present levels and implementing nitrogen removal at some STPs discharging into the study area.

The Commission is preparing a Federal Consistency Report to develop guidelines that will ensure that the actions recommended by the Long Island Sound Study are consistent with other programs in the area.

Recent federal legislation provides for the establishment of a Long Island Sound Office and extension of the program to monitor implementation of the CCMP.

New York-New Jersey Harbor Estuary Program

Besides its active role as a member of the Management Committee, the Commission has been participating in a separate but related study, the New York Bight Restoration Plan, and on several work groups, such as wasteload allocation (WLA), pathogens and toxics. As part of the Bight study, the Commission took part

in the development of a short-term floatables action plan that was successfully implemented for the 1989 and 1990 beach seasons.

COMBINED SEWER OVERFLOWS

The Commission sponsored a Combined Sewer Overflow Conference in 1989. Panel discussions addressed state policy, guidelines and regulations as well as local government progress and problems. Officials from the federal government, all three member states, local municipalities and sewerage authorities, as well as public interest groups and consulting engineers took active roles in the working sessions.

Follow-up meetings have been held among ISC and the environmental departments of its three member states to discuss wet weather effluent requirements for CSOs. The discussions have focused on the National and State CSO strategies, the pollutants that might be controlled at CSOs and those that might better be controlled elsewhere (e.g. by pretreatment), and the effluent values that would be necessary for those pollutants that are amenable to control at the CSOs. This project will be continued in 1991.

III. AIR POLLUTION

GENERAL

The Commission has conducted an interstate air pollution program since 1962. Over the years, the emphasis has focused on investigations, applied research, and advocating regional viewpoints on environmental issues. During 1990, the ISC continued to receive air pollution complaints, especially from Staten Island. For the 12-month period ending September 30, 1990, a total of 247 air pollution complaints were received; a significant decrease -- 60% -- from that of the previous 12-month period.

For the third consecutive year, the Commission coordinated the regional Ozone Health Message System during the summer months. Health advisories were issued to the public on days when the ISC received information of unhealthy concentrations of ozone from the States of New Jersey and Connecticut. The messages reached the public through communications from wire services and radio and television stations; they were also sent to environmental and health agencies of the States.

Pollutant values and meteorological conditions did not warrant activation of the Regional High Air Pollution Alert and Warning System, which ISC has coordinated since 1970.

AIR POLLUTION COMPLAINTS

The New York-New Jersey border in the vicinity of Staten Island generates more citizen complaints of disagreeable odors and airborne pollutants than any other single area under the jurisdiction of the Commission.

In June 1989, ISC closed its Staten Island field office, established in 1982, because of severe budget cuts. As a result, the Commission has continued to receive air pollution complaints but its ability to respond and investigate them has been sharply curtailed. Complaints are now handled at the Commission's office during regular office hours and, whenever necessary, Commission personnel are reached at home by ISC's answering service during non-office hours.

For the 12-month period ending September 30, 1990, the Commission received a total of 247 complaints. This represents a decrease of 60% compared to the previous 12-month period. The complaints were categorized by the Commission into four groupings which are presented in the following tables. The groupings are: (1) community from which complaints were made, (2) type of odor, (3) time of day and (4) day of the week.

Forty-five Staten Island communities were the source of at least one complaint to the Commission during the October 1989 - September 1990 period. New Springville reported more odor complaints than those of any other Staten Island community for the fifth consecutive year. Twenty-six complaints (10.5% of the total) were reported from New Springville. Eight communities -- Eltingville, Tottenville, West New Brighton, Willowbrook, New Dorp, Westerleigh, Great Kills and Bulls Head -- reported between 10 and 19 complaints during the 12-month period. Only seven complaints were registered from the four other boroughs of New York City; none were received from New Jersey or Long Island.

Based on the descriptions reported by the citizens, odors were classified into ten categories as shown in the table. The "chemical and others" category was most frequently reported with 81 complaints or 32.8% of the total. It should be noted that the "chemical and others" category represents odors that were described as "chemical", as well as odors that could not be more specifically identified by the complainants. "Garbage odor" was reported in 24.7% of the complaints; the combined total of the categories of "natural gas/gassy" and "oil/gasoline" were equal to those reported for "garbage". More than half of the "garbage odor" complaints were received during the summer months from June through August 1990. The large majority of the petroleum-type odors were reported beginning in January 1990, which appears to coincide with the series of oil spill events in the Arthur Kill and nearby waterways.

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY COMMUNITY ON STATEN ISLAND FROM OCTOBER 1989 TO SEPTEMBER 1990

COMMUNITY	COMPLAINTS	
	NUMBER	% OF TOTAL
New Springville	26	10.5
Eltingville	19	7.7
Tottenville	17	6.9
West New Brighton	16	6.5
Willowbrook	14	5.7
New Dorp	13	5.3
Westerleigh	12	5.0
Great Kills	11	4.5
Bulls Head	10	4.0
Huguenot	9	3.6
Travis	9	3.6
Annadale	8	3.2
Mariner's Harbor	8	3.2
Emerson Hill	6	2.4
Heartland Village	6	2.4
Rosebank	6	2.4
St. George	5	2.0
All Others *	52	21.1
TOTALS	247	100.0

* Represents 28 communities from which four or fewer complaints were reported per community. In addition, this total includes seven complaints from other New York City boroughs.

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY TYPE OF ODOR
FROM STATEN ISLAND COMMUNITIES
FROM OCTOBER 1989 TO SEPTEMBER 1990

TYPE OF ODOR	COMPLAINTS	
	NUMBER	% OF TOTAL
Garbage	61	24.7
Natural Gas/Gassy	36	14.6
Oil/Gasoline	25	10.1
Burning Rubber/Plastic	16	6.5
Cat Urine	13	5.3
Sulfur/Eggy	7	2.8
Sewage	5	2.0
Soap/Detergent	3	1.2
Dead Fish/Fishy	0	0.0
Chemical & Others	81	32.8
TOTALS	247	100.0

* Represents odors described as "chemical" as well as odors that could not be more specifically identified by the complainants.

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY TIME OF DAY
FROM STATEN ISLAND COMMUNITIES
FROM OCTOBER 1989 TO SEPTEMBER 1990

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 1989	13	14	11	38	15.4
November 1989	2	9	5	16	6.5
December 1989	0	0	0	0	0.0
January 1990	3	12	15	30	12.1
February 1990	1	0	3	4	1.6
March 1990	1	8	9	18	7.3
April 1990	2	0	4	6	2.4
May 1990	4	5	12	21	8.5
June 1990	2	13	13	28	11.3
July 1990	8	15	6	29	11.8
August 1990	7	16	12	35	14.2
September 1990	3	8	11	22	8.9
TOTALS	46	100	101	247	
% OF TOTAL	18.6	40.5	40.9		100

* Includes Weekends and Holidays

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY DAY OF WEEK
FROM STATEN ISLAND COMMUNITIES
FROM OCTOBER 1989 TO SEPTEMBER 1990

MONTH	NUMBER OF COMPLAINTS Day of Complaints*						
	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
October 1989	5	3	11	3	3	7	6
November 1989	3	4	2	2	1	1	3
December 1989	0	0	0	0	0	0	0
January 1990	0	20	6	4	0	0	0
February 1990	1	0	0	2	1	0	0
March 1990	0	4	5	6	1	1	1
April 1990	3	0	0	1	1	0	1
May 1990	3	5	0	6	4	3	0
June 1990	6	6	5	2	2	5	2
July 1990	4	8	6	2	2	5	2
August 1990	0	6	7	12	7	0	3
September 1990	3	8	2	3	1	3	2
TOTALS	28	64	44	43	23	25	20
% OF TOTAL	11.4	25.9	17.8	17.4	9.3	10.1	8.1

* Includes Holidays

Complaints were tabulated according to three time intervals: midnight to 8:00 A.M., 8:00 A.M. to 4:00 P.M., and 4:00 P.M. to midnight, in order to determine when most of the complaints are made. The table presenting complaints as a function of the time of day shows that 40.9% were reported between 4:00 P.M. and midnight and 40.5% between 8:00 A.M. and 4:00 P.M. The table also shows the number of complaints during the 12-month period ranged from a high of 38 in the month of October 1989, to zero calls in December 1989.

The complaints were also grouped by the day of the week on which they were reported. The number of complaints per day of the week ranged from 64 calls, or 25.9% of the total, on Tuesdays to a low of 20 calls, or 8.1% of the total, on Sundays. These daily frequency values coincide with patterns of previous years and indicates that most complaints are made on mid-week days and the least are lodged on Sundays.

OZONE HEALTH MESSAGE SYSTEM

For the third consecutive year, the Ozone Health Message System was activated to alert the public of unhealthy levels of ozone existing in the atmosphere of the Metropolitan Region. The system was developed as a cooperative effort by environmental and health representatives from the Commission; the States of New Jersey, New York and Connecticut; New York City and the U.S. EPA. It serves as a single source of precautionary advice on ozone to the Region during the warm-weather months from May to September when higher concentrations of ozone are experienced.

Information on ozone concentrations recorded by eleven continuous monitoring stations in the Region is received and coordinated by the Commission. When conditions warrant, ISC announces to the public, via communication with the electronic media, that elevated levels of ozone exist in the Metropolitan Area. The "health advisories" are sent to the wire sevices, radio and television stations as well to governmental environmental and health agencies. Independently, the individual States also issue their own health messages that identify specific localities where ozone levels are a special health threat.

Since ozone irritates the respiratory system and may cause decreased lung function, this pollutant especially affects the elderly and those with pre-existing lung disease. Healthy adults and children may feel the effects during high ozone days. Adverse effects may include: shortness of breath, chest pain, throat and eye irritation and wheezing. Whenever ozone reaches unhealthy levels, the System advises against strenuous outdoor activities and physical exertion such as jogging, ball playing, and running.

Hourly ozone readings were transmitted by the States of New Jersey and Connecticut each weekday between 11 A.M. and 3 P.M. during the summer. New York State and New York City discontinued their participation in this regional, interstate, public notification program in 1988.

A "health advisory" message, indicating that at least two monitoring stations recorded ozone levels exceeding the National Ambient Air Quality standard of 0.12 ppm during a particular hour, was sent on four days this season. Only three "health advisories" were transmitted in 1989, but there were sixteen days when they were sent in 1988. A total of nineteen ozone values of 0.12 ppm or higher was recorded during the summer of 1990 from seven monitoring stations in New Jersey and four in Connecticut.

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 high pollutant concentrations and/or stagnation advisory reports, the Commission may activate this system. During the past year, conditions did not warrant activation of the system.

IV. LEGAL ACTIVITIES

In 1990, the Commission continued its participation in two active multi-party federal court cases in New Jersey District Court and two New York State administrative hearings concerning State Pollutant Discharge Elimination System (SPDES) permits issued to municipal wastewater treatment plants. A fourth interim decision was issued by the Commissioner of the New York State Department of Environmental Conservation (NYS DEC) in the administrative hearing held on the permit applications for the resource recovery facility (RRF) proposed to be constructed at the Brooklyn Navy Yard. ISC was a party to this proceeding, which was the longest administrative hearing in NYS DEC history. The decision withheld authorization for the issuance of the permits to construct and operate the RRF pending identification of a conforming site for ash disposal. It was thought that the hearing would reconvene on the issue of ash disposal in 1990. New York City's commitment to recycling may effect the City's decision on the construction of and operation of a RRF in the Brooklyn Navy Yard. The hearing has not reconvened.

In September 1990, the Commissioner of the New York City Department of Sanitation (NYC DOS) issued a report on recycling which stated that while the City has met its first year recycling goals, it will not make its upcoming goals. In the meantime, the U.S. Environmental Protection Agency (U.S. EPA) has recently issued a Prevention of Significant Deterioration permit for this project which will expire in 18 months if the project is not initiated by then, and the company contracting with the City to construct and operate the RRF has applied to the U.S. Army Corps of Engineers for a permit to dredge the channel where the barges will unload the municipal waste. The Commission is currently monitoring both the NYC DOS's recycling efforts and the situation regarding the proposed Brooklyn Navy Yard RRF. The Commission will participate in the hearing if it is reconvened and stands ready to support its prior position regarding the rejection of the Old Muldoon site at Fresh Kills Landfill for ash residue disposal since it is not a secure site and does not conform to the State's requirements.

LITIGATION AGAINST NEW YORK CITY'S OPERATION OF THE FRESH KILLS LANDFILL

This suit relates to the waterborne debris that enters the District waters as a result of the garbage unloading operation at Fresh Kills Landfill.

In 1986, the ISC intervened in an action in New Jersey federal District Court initiated by the Township of Woodbridge in 1979. Approximately 13 Court Orders were issued in the inter-

vening years prior to ISC's cross-motion for contempt in September 1987. As a result of the contempt citation by Judge Maryanne Trump Barry and in order to participate in formulating a solution to the Region's waterborne garbage problems, the parties to the suit entered into a Consent Order that required the City of New York to implement water cleanliness procedures; the installation of interim remedial equipment, including the superboom; and the hiring of an independent monitor. The Order also provides for an evaluation by an Independent Consultant of the effectiveness of the interim equipment and procedures and recommendations for alternative long-term measures by January 1, 1990.

The parties include ISC and co-plaintiffs Township of Woodbridge, State of New Jersey, Save Our Shores (a citizen group), and Groups Against Garbage (a citizen group), and the defendant, the City of New York

In 1988, the plaintiffs in this case filed motions requesting modification of the Court Order and the immediate implementation of a long-term alternative. The matter was referred to the Special Master. An evidentiary hearing was held in 1989 before the Special Master, Nicholas deB. Katzenbach, who found that while debris continued to enter the waterway, the parties could wait for the January 1, 1990 report.

The parties met on January 31, 1990 to discuss the Report of the Independent Consultant, including his recommendations regarding any long-term measures necessary to prevent solid waste from the marine operations at the Fresh Kills Landfill from entering the waterways. The parties agreed to further review the recommendations relating to containerization and a single-barge enclosed unloading system.

During this period, the ISC attended the technical meeting to discuss the assumptions underlying the recommendation regarding containerization. The NYC DOS needed four months to design and report on the feasibility of the single-barge enclosed unloading facility.

At the technical meeting on containerization held on May 3, 1990, the NYC DOS presented information regarding lead time and costs, and the rationale for and extent of the structural changes required at the marine transfer stations (MTSs). It became evident to the ISC at this meeting that the extensive structural changes at the MTSs, necessary because the heavy unloading equipment, would involve considerable time and cost. Also, in the case of some MTSs, it would not be possible because of physical constraints.

The parties received the NYC DOS report entitled "A Plan for the Design and Construction of a Single-Barge Enclosed Unloading

What about the Consent Order of 4/24/90

System at Fresh Kills" on June 18th. The City concluded that, of the final alternatives reviewed, the single-barge enclosed unloading facility presents the most effective and practical method to comply with Section II. J. 2(c) of the Consent Order and proposed to implement this alternative. Initially, the City would construct one unloader and then evaluate the necessity of building another.

The parties met on July 24th to discuss the NYC DOS proposal. Although agreeing with the basic proposal, the ISC commented on the following areas of concern: (1) length of time to construct the unloading system -- 39 months; (2) unanswered technical questions not set forth in the report; for example, whether the described sloping area around the barge is made of steel or is a moveable skirt made of rubber; and (3) the revision of water cleanliness protocols to include procedures for the new system.

The parties decided at the meeting that the commitment to implement the single-barge unloading system would be addressed in a Consent Order. The City agreed to submit a draft Order to the parties. Various other matters would also be addressed in the Consent Order, such as the continuation of the Independent Monitor and continued access to the landfill by the ISC and State of New Jersey for inspection purposes.

At the parties meeting, the NYC DOS stated that it was committed to recycling and source reduction to reduce the waterborne waste by almost half the current amount arriving by barge and would not build a second unloader. On August 17, 1990, the ISC noted its additional concerns regarding the three-year period when both the new system was in effect and the old system was being phased out -- a period when the NYC DOS would be searching for other ways to dispose of the waterborne waste that was not recycled or reduced in amount.

A proposed Consent Order was submitted by the NYC DOS in November. The Commission is now reviewing the Consent Order and will meet with the parties to negotiate the terms.

LITIGATION AGAINST HUDSON COUNTY MUNICIPALITIES

Litigation was initiated to enforce ISC Regulations at treatment plants located in five Hudson County, New Jersey municipalities. ISC intervened in the underlying Clean Water Act enforcement action in 1986. In 1987, the court granted plaintiffs' motions for partial summary judgment on the issue of liability against defendants Bayonne, West New York, and North Bergen. As a result, and after lengthy negotiations with the plaintiffs, all of the defendants have signed Consent Orders.

The parties involved are the U.S. EPA and ISC, co-plain-

tiffs, and the following major defendants: the Hudson County Utilities Authority, Guttenberg, Weehawken and Union City; and the State of New Jersey which was a necessary named defendant pursuant to the Clean Water Act.

Jersey City

Jersey City implemented its schedule to tie its two sewage treatment plants into the Passaic Valley Sewerage Commissioners' (PVSC) regional facility but did not meet the Consent Order deadline of December 1988. The Jersey City Sewerage Authority began pumping wastewater from the West Side plant to PVSC on September 28, 1989. The East Side plant was tied into PVSC on December 13, 1989.

The defendant had submitted Force Majeure applications regarding its delays. The ISC had evaluated the requests, met with the defendants and U.S. EPA and requested additional materials. These were received in December 1989 and reviewed by the Commission and U.S. EPA. After conferring with U.S. EPA, the Commission informed the defendant that the disputes had been resolved and the plaintiffs would not seek penalties.

Bayonne

Pursuant to its Consent Order, the City of Bayonne was required to end discharging wastewater from its treatment plant by December 30, 1989. The defendant made a request to extend this deadline to March 31, 1990 and invoked the Force Majeure provision citing delays due to chromium-contaminated soil and a damaged pipe.

After reviewing the submitted materials, the Commission agreed to the extension of the compliance schedule. On March 31, 1990, the City of Bayonne commenced diverting sewage flows to the PVSC secondary treatment facility.

West New York

The defendants signed the Consent Order in early 1990. However, the plaintiffs were unable to sign since the defendants were in violation of the compliance schedule as set forth in the Order. The schedule required the issuance of a Notice to Proceed with construction on or before February 28, 1990. Because the U.S. EPA Bid Protest was not resolved until after this date, the Notice to Proceed was not issued until April 9, 1990. An amended Consent Order, reflecting the changed dates in the construction schedule, was signed by all parties. The Consent Order was published in the Federal Register and entered with the Court on October 29, 1990. The compliance schedule in the Consent Order requires that the facility be upgraded by April 9, 1992, and meet

secondary permit limits by July 9, 1992. The defendant has also paid a $160,000 fine for its Clean Water Act violations.

North Bergen

Construction upgrading of the North Bergen Municipal Utilities Authority-Woodcliff Sewage Treatment Plant started in April 1989. The Consent Order was entered with the Court on February 9, 1990. After a warning regarding its initial Progress Report, North Bergen was notified by the Commission that it had not submitted its Progress Reports for April and May, as required by the Consent Decree, and was therefore subject to stipulated penalties. North Bergen contested this penalty and filed a Force Majeure notice on July 23rd regarding its implementation schedule. The plaintiffs have requested and received documentation from the defendant regarding the extension request and are meeting to discuss the stipulated penalties for failure to submit Progress Reports. The upgrade was completed on October 30, 1990. It is now projected that the plant will achieve final compliance with permit limits and ISC Regulations by February 1, 1991.

Hoboken

The underlying U.S. EPA and ISC complaints were amended in July 1990 to name the new Hoboken-Union City-Weehawken Sewerage Authority (HUCWSA) as a necessary defendant pursuant to the Federal Rules of Civil Procedure. In the early part of 1990, a Notice to Proceed was issued on the contract to upgrade the plant and construction started. Although expected much earlier, the Consent Order was not signed by all the parties until August. This was due to the new subregional authority disagreeing with the option chosen for the secondary sludge facilities. Court action involving the contractor awarded the contract to build the sludge gasifier and HUCWSA has ensued. Prior to the awarding of the federal grant funds for this project and the decision on the air permit necessary for the gasifier, HUCWSA asked the Commissioner of the New Jersey Department of Environmental Protection (NJ DEP) to review the technical support document for the air permit. Various citizen groups and some local public officials seem to oppose the gasifier because of its high smoke stack and location at the base of the Palisades. However, at the time, HUCWSA did not propose an alternative sludge disposal method and the NJ DEP, after reviewing additional submittals, issued an air permit.

Sludge facilities are included in the upgrade to secondary treatment and a definite schedule was negotiated. The underlying court action in this matter was initiated in 1979. The Hoboken plant is still only a primary treatment plant and, in fact, has only recently managed to function as a primary plant. Conditions had deteriorated to such a degree that the influent wastewater

was of better quality and less polluted than the effluent. As a condition of ISC's continuing participation in negotiations, an independent troubleshooter was hired in 1989 to correct the deficiencies and to actually operate and maintain the plant.

The Consent Order was lodged with the United States District Court for the District of New Jersey on September 4, 1990 and published in the Federal Register on September 18, 1990. The Department of Justice did receive written comments from a local group. These comments were responded to but, as of the date of this writing, the decree was not yet entered with the Court.

The Consent Decree requires the City of Hoboken to expand and upgrade its sewage treatment plant to provide secondary treatment by January 8, 1993. The Consent Decree also requires Hoboken to pay a civil penalty of $225,000 and contains a limitation on flow capacity to the plant.

NEW YORK CITY SEWAGE TREATMENT PLANT PERMIT HEARINGS

The ISC brought suit in State Supreme Court in Queens County in November 1989, over the NYS DEC - Region II's failure to hold a hearing prior to issuing SPDES permits to the City of New York Department of Environmental Protection (NYC DEP) for wastewater discharges from its 14 sewage treatment plants (ISC v. Jorling). In a Judgment issued in April 1989, the Court held that the NYS DEC had acted arbitrarily and capriciously in not holding a hearing and ordered that an adjudicatory hearing be held. This proceeding is the hearing resulting from that Judgment.

The parties involved are the ISC and co-petitioners Natural Resources Defense Council (NRDC), Hudson River Fishermen's Association (HRFA), Sierra Club and the Environmental Defense Fund (EDF) as well as the NYS DEC, and the NYC DEP. The NYS DEC Administrative Law Judge (ALJ) assigned to this hearing is Andrew S. Pearlstein.

In his preliminary Rulings in September 1989, ALJ Pearlstein certified four issues: (1) toxic effluent standards, (2) industrial pretreatment, (3) untreated discharges, and (4) plant capacity. On April 20, 1990, the ALJ issued his Rulings on the remaining issues in this proceeding. Judge Pearlstein found that the applicable law required the incorporation and inclusion of both the ISC Water Quality Regulations and notice of the need to obtain a waiver from the ISC in the 14 NYC SPDES permits which are the subject of this hearing. The ALJ also excluded as issues the NYC DEP's proposed modifications to eliminate the ISC 6-hour effluent limitations and year-round disinfection requirements since the ISC standards are legally applicable to the City's discharges.

Both the NYS DEC and the NYC DEP appealed the ALJ's Ruling as it pertained to the ISC Regulations. The NYS DEC requested an amendment of the rulings to require the referencing of 21 NYCRR Part 550 in the permits without identifying the regulations and requirements as those of the ISC. The NYC DEP opposed the Ruling as to the notice of need to obtain a waiver from the ISC of its Regulations and argued that the issue of whether the ISC 6-hour effluent limitation and disinfection requirements should be eliminated from the permits was a factual issue which should be adjudicated in the hearing. Pursuant to 6 NYCRR Part 624, the rulings of the ALJ are appealed in writing to the Commissioner of the NYS DEC. As of this writing, he has not yet ruled on the appeals.

In his Issues Ruling, ALJ Pearlstein directed all intervenors to submit proposed permit modifications on the four certified issues in the form and language of actual permit conditions. These proposed permit conditions were submitted and discussed at a Pre-hearing Conference in May 1990.

The ISC submitted proposed permit conditions relating to the following issues: (1) capacity and flow measurement, (2) toxic limits, (3) pretreatment, and (4) untreated discharges. The ISC also submitted permit conditions reflecting a regional perspective and more stringent provisions and policies in permits issued by the NJ DEP and the Connecticut DEP.

At the May 25th Pre-hearing Conference, U.S. EPA requested and was granted status as "friend of the court" because, as of June 4th, the waters of New York Harbor were listed pursuant to Section 304 (l) of the Clean Water Act. This listing occurs for waters the State does not expect to achieve applicable standards due substantially to point source discharges of toxics.

A second procedural conference was held on September 17, 1990, to determine those issues which could be resolved among the parties by stipulation and which are appropriate for adjudication at the hearing or should be discussed in further settlement negotiations.

As a result of the September 17th conference, the ALJ directed the parties to submit a Statement of Issues. These statements were submitted, technical meetings were then held to further discuss the permit modifications proposed by the parties. A further technical meeting and a conference before the ALJ are scheduled for December 21, 1990.

YONKERS JOINT WASTEWATER TREATMENT PLANT PERMIT MODIFICATION HEARING

ISC petitioned for party status in a NYS DEC administrative hearing on the modification sought to re-rate this plant's design flow from 92 MGD to a flow of 120 MGD, with an allowed flow of 145 MGD during winter months. No construction to augment the plant or operational changes were planned. A determination of the ALJ, Andrew S. Pearlstein, on September 1, 1989, granted the ISC full party status. Issues included in the proceedings were the impact of the action on water quality, consideration of alternatives to the proposed action, and odor.

The parties involved are the ISC and the Ludlow Park Homeowners Association as well as the applicant, Westchester County Department of Environmental Facilities (DEF), and the New York State Department of Conservation - Region III (NYS DEC).

The hearing convened at the Yonkers treatment plant on November 28, 1989, but was adjourned until December 20th to resolve comments and concerns about the plant re-rating raised by U.S. EPA. It was further adjourned until February 27, 1990, since progress toward negotiated settlement was being made at the technical meetings held in December and January on the water quality issues.

On December 11, 1989, the ISC submitted pre-filed testimony regarding water quality model runs with attached charts that the ISC intended to offer into evidence as exhibits. This testimony was submitted in support of the ISC's position that the proposed increased flow will result in a negative impact on water quality. On January 3, 1990, the ISC submitted additional pre-filed testimony regarding the plant performance analysis.

As a result of negotiations this during January and February 1990, Westchester County DEF, the NYS DEC, and the Interstate Sanitation Commission have agreed to proposed permit conditions in settlement of the water quality issues in this hearing.

Among other issues, Westchester County DEF agreed to implement a schedule of compliance to reduce excessive infiltration and inflow in the entire sewer system in the Yonkers Sewer District. This schedule is being proposed to be included as a provision of the SPDES permit for Yonkers.

Westchester County has also agreed to a cap of 5 MGD of additions of all sewage from both new tie-ins to existing sewer lines and sewer line extensions. Additionally, a mass loading limitation for BOD and TSS based on a 30-day average for a 92 MGD plant will be included in the permit limitations.

This increase of flow is temporary, and a proposed permit provision states that the flow will revert to 92 MGD six (6) months prior to the expiration date. The NYS DEC may determine a new interim lower flow for the six-month period if the permittee is in compliance with its schedule and with permit limitations. However, the proposed permit language also notes that no presumption is created that the increase in the flow limitations shall continue in effect beyond the term of the present permit.

The NYS DEC, the Westchester County DEF and the ISC have signed the stipulation settling the water quality issues and terminating ISC's participation in the hearing. This stipulation was sent to ALJ Pearlstein in late July.

The odor/air quality issues have not been settled. The hearing reconvened on June 14th. The direct testimony and cross-examination of the expert witnesses were concluded. The ALJ officially closed the hearing record on September 24, 1990, pursuant to 6 NYCRR Part 624.15(a); the Commissioner's decision is due 60 days after the close of the record. If the Commissioner's decision is not appealed, at that point the permit will be modified according to the terms of the stipulation. Until that time, the stipulation is viewed by the parties as a contract and the Westchester County DEF has proceeded to implement its requirements. The Commissioner of the NYS DEC, by letter dated May 25, 1990, lifted the moratorium on new connections to the sewer system in light of the parties' agreement on the water issues and the steps taken to protect the receiving water.

WASTEWATER TREATMENT PLANTS
DISCHARGING INTO
INTERSTATE SANITATION DISTRICT WATERS
1990

Plant	ISC Receiving Water Classification	Date of Const.	Flow MGD Average	Flow MGD Design	Type of Treatment	Estimated Population Served
CONNECTICUT						
Fairfield County						
Bridgeport - East Side	B-1	1973+	10.6	12.0	Secondary (AS)	45,000
- West Side	B-1	1973+	23.0	30.0	Secondary (AS)	113,000
Fairfield	A	1982+	8.1	9.0	Secondary (AS)	50,000
Greenwich	A	1982+	8.2	8.5	Secondary (AS)	54,000
Norwalk	B-1	1980+	11.2	15.0	Secondary (AS)	79,000
Stamford	B-1	1976+	15.1	20.0	Secondary (AS)	100,000
Stratford	A	1982+	7.6	11.5	Secondary (AS)	51,500
Westport	A	1975+	1.9	2.8	Secondary (AS)	13,500
New Haven County						
Milford - Beaver Brook	A	1987+	2.0	3.2	Secondary (AS)	13,000
- Housatonic	A	1987	6.5	8.0	Secondary (AS)	22,000
New Haven - East Shore	B-1	1989+	38.3	40.0	Secondary (AS)	215,000
West Haven	B-1	1988+	7.5	12.5	Secondary (AS)	55,000
NEW JERSEY						
Bergen County						
Edgewater	B-1	1989+	3.6	6.0	Secondary (AS)	21,000
Essex County						
Passaic Valley Sewerage Commissioners	B-1	1988+	290.9	330.0	Secondary (AS)	1,520,000
Hudson County						
Bayonne	B-2	1953	-	10.0	Primary ***	60,000
Hoboken	B-1	1955	11.7	20.7	Primary	71,000
Kearny	B-2	1955	1.9	3.6	Primary ***	24,000
North Bergen M. U. A. - Woodcliff	B-1	1962	3.2	3.3	Primary	26,000
West New York	B-1	1982+	9.1	10.0	Primary	57,000
Middlesex County						
Carteret	B-2	1950	-	3.0	Primary ***	21,000
Middlesex County Utilities Authority	A	1978+	111.2	120.0	Secondary (AS)	890,000
Old Bridge Township	A	1962	-	1.0	Primary ***	15,000
Woodbridge - Sewaren	B-2	1952	-	10.0	Primary ***	55,000
Monmouth County						
Cliffwood Beach	A	1964	0.55	0.75	Secondary (AS)	-
River Gardens	A	1978+	0.11	0.10	Secondary (AS)	-
Union County						
Joint Meeting of Essex & Union Counties	B-2	1978+	72.9	75.0	Secondary (AS)	500,000
Linden Roselle Sewerage Authority	B-2	1989+	13.1	17.0	Secondary (AS)	60,000
Rahway Valley Sewerage Authority	B-2	1988+	36.0	35.0	Secondary (AS)	193,000
NEW YORK						
Nassau County						
Bay Park	A	1989+	60.1	70.0	Secondary (AS)	510,000
Belgrave Sewer District	A	1988+	1.5	2.0	Secondary (TF)	12,000
Cedar Creek	A	1989+	56.7	56.0	Secondary (AS)	460,000
Cedarhurst	A	1968+	0.9	1.0	Secondary (TF)	7,000
Cold Spring Harbor Laboratory*	A	1975	0.047	0.075	Physical/Chemical	350 - 500
Glen Cove	A	1981+	4.5	8.0	Secondary (AS)	28,000

WASTEWATER TREATMENT PLANTS
DISCHARGING INTO
INTERSTATE SANITATION DISTRICT WATERS
1990

Plant	ISC Receiving Water Classification	Date of Const.	Flow MGD Average	Flow MGD Design	Type of Treatment	Estimated Population Served
NEW YORK (Continued)						
Nassau County (Continued)						
Great Neck Sewer District	A	1976+	2.7	2.7	Secondary (TF)	13,000
Great Neck Village	A	1988+	0.9	1.5	Secondary (TF)	9,000
Inwood	A	1989+	1.1	2.5	Secondary (TF)	11,000
Jones Beach	A	1985+	0.08	2.5	Secondary (TF)	Seasonal
Lawrence	A	1966+	1.4	1.5	Secondary (TF)	6,000
Long Beach	A	1990+	6.4	7.5	Secondary (TF)	40,000
Oyster Bay Sewer District	A	1965+	1.4	1.2	Secondary (TF)	8,500
Port Washington Sewer District	A	1969+	3.3	3.0	Secondary (TF)	30,000
West Long Beach Sewer District	A	1986+	0.7	1.5	Secondary (TF)	5,000
New York City						
Bronx County						
Hunts Point	B-1	1978+	159.9	200.0	Secondary (AS)	895,000
Kings County (Brooklyn)						
Coney Island	A	1958+	98.5	100.0	Secondary (AS)	690,000
Newtown Creek	B-1	1967	333.0	310.0	Secondary (AS)	1,100,000
Owls Head	B-1	1952	113.5	160.0 ?120	Secondary (AS)	785,000
Red Hook	B-1	1987	43.9	60.0	Secondary (AS)	262,000
26th Ward	A	1975+	67.3	85.0	Secondary (AS)	301,000
New York County (Manhattan)						
North River	B-1	1986	158.0	170.0	Secondary (AS)**	1,162,000
Wards Island	B-1	1978+	259.0	250.0	Secondary (AS)	1,300,000
Queens County						
Bowery Bay	B-1	1978+	160.3	150.0	Secondary (AS)	712,000
Jamaica	A	1977+	83.6	100.0	Secondary (AS)	585,000
Rockaway	A	1978+	30.0	45.0	Secondary (AS)	72,000
Tallman Island	B-1	1979+	63.6	80.0	Secondary (AS)	465,000
Richmond County (Staten Island)						
Arthur Kill Correctional Facility*	B-2	1969	0.14	0.1	Secondary (AS)	1,000
Elmwood Park Condominiums*	B-2	1974	-	2.5	Secondary (RD)	1,800
IS-7*	A	1964	0.003	0.13	Extended Aeration w/ Sand Filtration	1,100
Mount Loretto Home - Plant #1*	A	1962	-	-	Septic Tank	300
- Plant #2*	A	1962	-	-	Septic Tank	700
Oakwood Beach	A	1979+	31.8	40.0	Secondary (AS)	286,000
Port Richmond	B-2	1979+	40.4	60.0	Secondary (AS)	210,000
PS-3*	A	1969	-	0.004	Extended Aeration	1,000
PS-42*	B-2	1967	0.0046	0.21	Secondary (AS)	1,100
Saint Joseph's School*	A	1963	-	0.02	Septic Tank with Sand Filtration	1,000
Staten Island University Hospital, South*	A	1985+	0.031	0.04	Secondary (AS)	750
Village Green*	B-2	1970	0.52	1.0	Extended Aeration	5,000
Rockland County						
Joint Regional Sewerage Board-Town of Haverstraw	A	1980+	5.2	8.0	Secondary (AS)	50,000
Orange & Rockland Utilities*	A	1984+	0.005	0.012	Secondary (AS)	Industrial
Orangetown Sewer District	A	1985+	9.6	8.5	Secondary (TF)	50,000
Palisades Interstate Park						
Bear Mountain Plant	A	1967+	0.09	0.25	Secondary (TF)	Seasonal
Tallman Mountain Plant	A	1968	-	0.01	Secondary (AS)	Seasonal
Rockland County Sewer District #1	A	1989+	19.0	26.0	Secondary (RD)	180,000
Stony Point	A	1985+	0.99	1.0	Secondary (AS)	10,000

WASTEWATER TREATMENT PLANTS
DISCHARGING INTO
INTERSTATE SANITATION DISTRICT WATERS
1990

Plant	ISC Receiving Water Classification	Date of Const.	Flow MGD Average	Flow MGD Design	Type of Treatment	Estimated Population Served
NEW YORK (Continued)						
Suffolk County						
Huntington Sewer District	A	1988+	2.0	2.5	Secondary (RD) (TF)	25,000
Northport	A	1973+	0.35	0.3	Secondary (AS)	3,500
Suffolk County Sewer District #1	A	1988+	0.7	2.5	Secondary (RD)	12,000
Suffolk County Sewer District #3	A	1989+	23.7	30.0	Secondary (AS)	210,000
Suffolk County Sewer District #6	A	1973+	0.7	2.0	Secondary (AS)	10,000
Suffolk County Sewer District #21	A	1989	1.4	2.5	Secondary (BO)	20,000
Westchester County						
Blind Brook (Rye)	A	1985+	3.3	5.0	Secondary (AS)	25,500
Buchanan	A	1990+	0.21	0.50	Secondary (AS)	2,000
Kings Ferry Sewer Association*	A	1971	0.037	0.05	Secondary (AS)	600
Mamaroneck	A	1965+	18.4	18.0	Primary	80,000
Metro North (Harmon Shop)*	A	1984+	0.16	0.40	Physical/Chemical	Industrial
New Rochelle	A	1982+	17.5	13.6	Secondary (AS)	80,000
Ossining	A	1981	4.9	7.0	Secondary (AS)	40,000
Peekskill	A	1980+	6.8	10.0	Secondary (AS)	35,000
Port Chester	B-1	1990+	4.4	6.0	Secondary (RD)	26,000
Springvale Apartments Company*	A	1957	0.1	0.1	Secondary (TF)	1,000
Yonkers Joint Treatment	A	1988+	115.0	92.0	Secondary (AS)	500,000***
FEDERAL & MILITARY						
Camp Smith - (Westchester Co.)	A	1988+	0.09	0.24	Secondary (TF)	2,000
FDR Veterans Administration Medical Center (Westchester Co.)	A	1982+	0.18	0.4	Secondary (TF)	3,000
Gateway National Recreation Area (Floyd Bennett Field, Kings Co.)	A	1981+	0.11	0.4	Secondary (TF)	2,000
Military Ocean Terminal (Hudson Co.)	B-1	1982+	0.11	0.18	Secondary (AS)	3,000

NOTES:
+ Year of major additions or reconstruction
* Private or institutional sewage treatment plant
** Presently providing primary treatment and disinfection; secondary treatment in 1991
*** Flow was diverted to a secondary treatment plant in 1990
(AS) Activated Sludge
(BO) Biochemical Oxidation
(RD) Rotating Disc
(TF) Trickling Filter

INTERSTATE SANITATION COMMISSION
FINANCIAL STATEMENT FY 1990

The Commission's accounting records are maintained on a cash basis and are audited annually by each of the participating States on a triennial basis. The following is a statement of cash receipts and disbursements for fiscal year July 1, 1989 to June 30, 1990:

CASH BOOK BALANCE AS OF JUNE 30, 1989 ----------		$290,746.46
RECEIPTS		
Connecticut - FY '90	$ 3,333.00	
New York - FY '90	236,250.00	
New Jersey - FY '90	315,000.00	
EPA - FY '89	120,800.00	
EPA - FY '90	217,500.00	
Long Island Sound Study - FY '88	29,045.00	
Interest	22,637.68	
Miscellaneous Receipts	718.62	
TOTAL RECEIPTS		945,284.30
	Sub-Total	$1,236,030.76
DISBURSEMENTS		
TOTAL DISBURSEMENTS		925,430.88
CASH BOOK BALANCE ON June 30, 1990		$310,599.88

Checking Account	$ 11,906.17
Insured Money Market Account	298,693.71
	$310,599.88

G L O S S A R Y

ALJ	administrative law judge
BOD	biochemical oxygen demand
CCMP	Comprehensive Conservation and Management Plan
CSO	combined sewer overflow
CT	Connecticut
DEC	Department of Environmental Conservation
DEP	Department of Environmental Protection
D.O.	dissolved oxygen
DOS	Department of Sanitation
EDF	Environmental Defense Fund
EPA	Environmental Protection Agency
FDA	Food and Drug Administration
HRFA	Hudson River Fisherman's Association
HUCWSA	Hoboken-Union City-Weehawken Sewerage Authority
HVAC	heating-ventilation-air conditioning
I/I	infiltration/inflow
ISC	Interstate Sanitation Commission
MCUA	Middlesex County Utilities Authority
MGD	million gallons per day
ml	milliliter
MPN	most probable number
MTS	marine transfer station
MUA	Municipal Utilities Authority
NEP	National Estuary Program
NJ	New Jersey
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRDC	Natural Resources Defense Council
NSSP	National Shellfish Sanitation Program
NYC	New York City
NYS	New York State
ppm	parts per million
PVSC	Passaic Valley Sewerage Commissioners
RBC	rotating biological contact disc
RRF	resource recovery facility
R/V	research vessel
SPDES	State Pollutant Discharge Elimination System
STP	sewage treatment plant
SUNY	State University of New York
TSS	total suspended solids
WLA	wasteload allocation
WPCP	water pollution control plant
>	greater than
≥	greater than or equal to
<	less than
≤	less than or equal to

INTERSTATE SANITATION COMMISSION

A TRI-STATE ENVIRONMENTAL AGENCY

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FOR IMMEDIATE RELEASE

INTERSTATE SANITATION COMMISSION DEMANDS NYS DEC HALT ADDITIONAL SEWAGE LINE HOOK-UPS TO WARDS ISLAND TREATMENT PLANT SERVING 12,000 ACRES IN MANHATTAN, BRONX

Charges Overloads Will Degrade NYC, NJ, Long Island Waterways, Affect Future Development

NEW YORK, May 11 -- The Interstate Sanitation Commission (ISC), the tri-state environmental agency, today demanded that the New York State Department of Environmental Conservation (NYS DEC) issue an immediate moratorium on further sewage line hook-ups to the Wards Island wastewater treatment plant serving an area of 12,000 acres in portions of Manhattan and the Bronx.

Such a moratorium on new hook-ups could eventually slow development in sections of both boroughs. The ISC charges that the Wards Island plant is currently operating at 77-million gallons per day over capacity and further hook-ups will adversely affect waterways around New York City and New Jersey as well as western Long Island Sound where members of the Long Island Sound Study, in which ISC is a participant, are currently

working to improve waters that are in a severely degraded state.

Only last week, the ISC learned that NYS DEC Commissioner Thomas C. Jorling had entered into a consent order with the City of New York allowing the City to continue to add sewage to the already overloaded Wards Island treatment plant for the next seven years.

In a letter to NYS Compliance Counsel Carl Ferrentino, the ISC stated the Commission's position that until a proper public adjudicatory hearing was held, as ordered by the Queens County Supreme Court, and the permits modified to reflect the outcome of that hearing, the connections allowed by the consent order be halted.

In a ruling on April 17th, Judge Sol Dunkin -- in response to an Article 78 suit filed by the ISC -- ruled that the NYS DEC acted in an "arbitrary and capricious" manner in failing to hold hearings either before or after issuing permits for the upgrading of New York City's 14 wastewater treatment plants.

ISC Chairman Anthony T. Vaccarello called NYS DEC Commissioner Jorling's actions, both in issuing the permits and signing the consent order, a "purposeful flouting of the ISC's authority and regulations for which there is no excuse since he, as an ISC Commissioner, knows full well the goals and responsibilities of the ISC. Instead of working with the ISC to improve water quality in the greater metropolitan region, these recent actions he has taken undermine the steps taken thus far towards protecting the waterways of the <u>entire</u> tri-state (NY-NJ-CT) region."

"Since the NYS DEC acknowledges that the municipal wastewater treatment plants, including Wards Island, play a major role in the deterioration of our waters, we are gratified that the Court supports us in our demands that a public adjudicatory hearing be held on the 'SPDES' (State Pollutant Discharge Elimination System) permits," he said.

"Along with environmental groups such as the Hudson River Fishermen's Association, the National Resources Defense Council and the Sierra Club, we feel the permits, as written, offer no assurances for preventing further pollution. In their present form," Vaccarello said, "the permits and the consent order would allow additional untreated sewage to flow into the region's waterways. The permits are in clear-cut violation of the ISC's water quality standards. To weaken the permits additionally with a privately negotiated consent order is a further insult to the environment."

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