

# INTERSTATE SANITATION COMMISSION

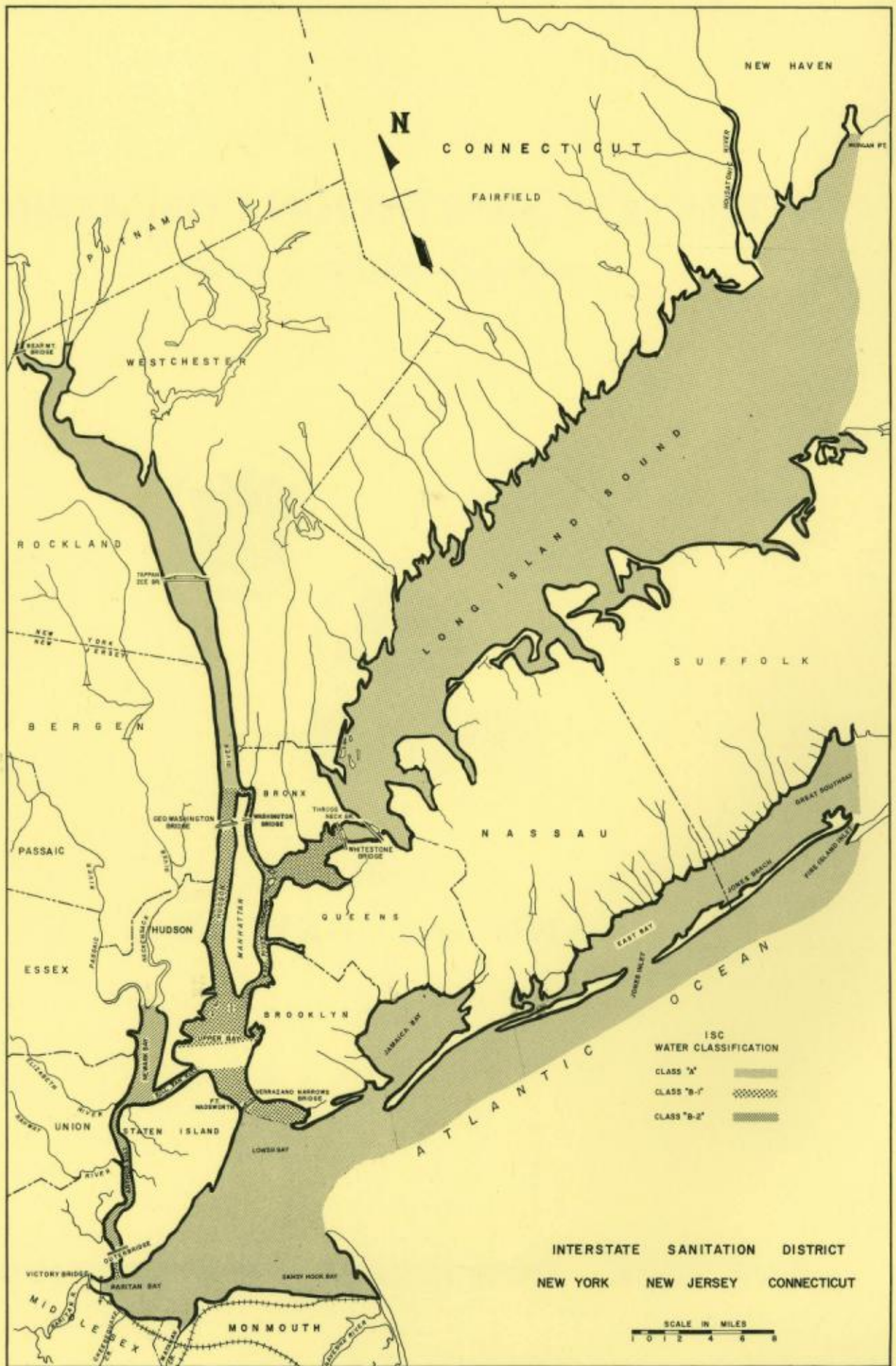
*A TRI-STATE ENVIRONMENTAL AGENCY*



1991

ANNUAL REPORT

NEW YORK    NEW JERSEY    CONNECTICUT





# INTERSTATE SANITATION COMMISSION

A TRI-STATE ENVIRONMENTAL AGENCY

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

January 24, 1992

New York, New Jersey, and Connecticut

Your Excellencies:

The Interstate Sanitation Commission respectfully submits its report for the year 1991.

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

Respectfully submitted,

For the State of New York

  
Acting Chairman

For the State of New Jersey

  
Vice-Chairman

For the State of Connecticut

  
Commissioner

INTERSTATE SANITATION COMMISSION

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# INTERSTATE SANITATION COMMISSION

A TRI-STATE ENVIRONMENTAL AGENCY



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R E P O R T

O F T H E

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W A T E R   P O L L U T I O N   C O N T R O L   A C T I V I T I E S

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STATEMENT OF THE CHAIRMAN  
OF THE  
INTERSTATE SANITATION COMMISSION

In a year of severe across-the-board budget cuts, the Commission is gratified that the States of New York and New Jersey expressed their continued confidence in the mission and accomplishments of the ISC by voting us their support. This support came at a time when the projected slashing of our funding threatened to render this 55-year old Commission virtually powerless and devoid of the ability to independently sample, test, regulate and enforce water quality regulations within our tri-state District. We enter 1992 with renewed determination to continue to merit that support. Again, this year, we were disappointed by the State of Connecticut. Despite our achievements and activities in areas that directly and indirectly affect that state -- including litigation concerning the discharge permits for the New York City wastewater treatment plants and the ISC's intensive sampling program in Long Island Sound -- Connecticut demurred from its obligation, as part of the Tri-state Compact, to support the Commission.

Nevertheless, despite our continuing budget restraints, the Commission is proud to note that we have been able to carry on our full program of responsibilities, although on a more limited basis than we would wish. This is an agenda -- deriving from the Tri-state Compact -- that includes water sampling and monitoring, and testing in our own laboratory to assure independent, unbiased results in matters that affect the entire tri-state Metropolitan area. In addition, we are pressing forward with our work in regulation -- to protect the region as a whole -- as well as our enforcement activities, including litigation when there are no other alternatives.

We have stretched our facilities to the limit to cover those areas we consider vital to the welfare of our District. We continue to sample and inspect public and private wastewater treatment plants as well as industrial dischargers within our District. We continue to inspect combined sewer overflows -- the largest remaining source of water pollution -- to insure that they are discharging only during wet weather. At the request of the New York State Department of Environmental Conservation, we mobilized our resources to conduct an intensive sampling survey in western Long Island Sound in order to document an anticipated hypoxic condition.

In the area of enforcement, among the highlights of our achievements in 1991, is the favorable ruling by the Administrative Law Judge that the ISC's regulations must be incorporated into the discharge permits for the 14 New York City sewage treatment plants. This ruling was especially important because it fully supported the Commission's position regarding incorporation of ISC's regulations into the permits. This will ensure that



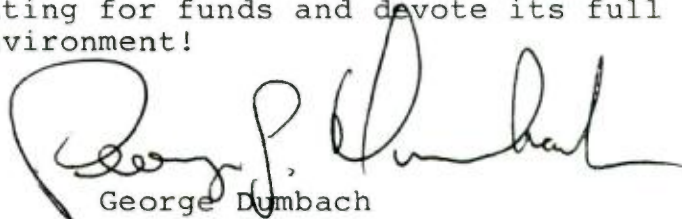
progress will continue to be achieved in the enhancement of the quality of the waterways within this region. This is an integral part of the Commission's goal of opening more areas for swimming and shellfishing.

In our long-standing litigation to ensure compliance with ISC's regulations at several Hudson County, New Jersey sewage treatment plants, 1991 marked another year of progress. As a result of the Consent Orders, North Bergen completed upgrading construction, Hoboken will be completed in mid-1992 and West New York anticipates an early completion date -- December 31, 1991.

In our much publicized Fresh Kills Landfill litigation we are hopeful that a final agreement is now within sight. However, ISC cannot agree to a final settlement until we can be assured that stipulated penalties will be imposed for non-conformance or that specific monies be put aside by the City of New York for the construction of an enclosed garbage barge unloading facility to protect the waterways and beaches along Staten Island and New Jersey from pollution caused by transfer operations.

Finally, on a personal note, I wanted to express my appreciation for the dedicated service of John Zimmerman as a Commissioner from Connecticut and, until his resignation in December, as Chairman. Despite heavy business obligations, Chairman Zimmerman made himself available when needed. At a time when financial considerations throughout the tri-state area, and particularly in Connecticut, put additional pressures on the Commission, John Zimmerman remained a strong, independent voice in support of the Commission's policy of maintaining strict standards of independence in matters of environmental protection.

I think I can speak for the entire Commission when I reiterate Chairman Zimmerman's desire, as expressed in his letter of resignation, that in future years the Commission will be able spend less time and energy fighting for funds and devote its full efforts toward improving our environment!



George Dumbach  
Acting Chairman

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## I. EXECUTIVE SUMMARY

The Interstate Sanitation Commission was formed in 1936 by a compact between the States of New York and New Jersey. The State of Connecticut joined the Commission in 1941. Originally dealing only with matters concerning water pollution, air pollution was added to the scope of the Commission's activities in 1962. In 1970, the Commission was designated as the official planning and coordinating agency for the New Jersey-New York-Connecticut Air Quality Control Region.

The Metropolitan Area is one of the most populated and industrialized regions in the nation. The waterways receive more than 2.7 billion gallons per day of treated effluents from municipal and private sewage treatment plants and industries. Additionally, there are untreated discharges from combined sewer overflows (CSOs) and storm sewers, and approximately 0.6 to 2 MGD of raw sewage discharges. Many of the stresses of population and industrialization can be generally assessed in terms of use impairments which have measurable social and economic effects. Nonetheless, thousands of acres of shellfish beds have opened in the past several years, very few beach closings occurred during the 1990 bathing season due to elevated levels of coliform bacteria or washups of debris, and the presence of many and varied finfish stocks have been available for commercial and recreational harvest.

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 necessary.

While operations at the Commission have been severely curtailed since July 1989 due to a 35% budget cut, the staff performed to its utmost to fulfill the technical and administrative tasks. The States' actions resulted in ISC employee layoffs and other employees resigning. Most of the ambient and effluent water quality sampling programs have been drastically reduced. The air pollution programs were virtually eliminated except for the Staten Island odor complaint answering service.

This report provides a record of the water and air pollution activities of the Interstate Sanitation Commission. 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. ISC is continuing to work toward its goal of making more areas available for swimming and shellfishing. Priorities have been set for enforcement, minimization of the effects of combined sewers, compliance monitoring, pre-treatment of industrial wastes, toxics contamination, participation in the National Estuary Program, ocean disposal of sewage sludge and dredged material 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 under way and will provide for the reduction of pollution from municipal and industrial wastewaters discharging into District waters. It is estimated that more than \$8.5 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.
- a party to an Article 78 Proceeding brought by the City of Yonkers to annul the negative declaration and, in effect, invalidate the permit stipulations to protect water quality that were agreed to by the ISC for the Yonkers Joint Wastewater Treatment Plant in Westchester County, N.Y.
- actively involved with Hudson County, New Jersey communities as to upgrading or eliminating their WPCPs to meet Commission and federal standards.
- working on a final settlement for a long-term solution to prevent debris from entering the waterways as a result of the unloading operations at New York City's Fresh Kills Landfill.
- cooperating with the Justice Department in New Jersey and New York with regard to actions in which they are involved.

Since completing its region-wide combined sewer overflow (CSO) report in 1988 and subsequently holding a regional CSO conference in 1989, the Commission has held meetings with representatives of the environmental departments of all three member states and the U.S. EPA to discuss CSO control on a regional basis.

A region-wide inventory of development projects within the District was again updated. A continuing concern of the Commission is whether the infrastructure -- the sewage treatment plants and the sewer systems -- has the capacity to accept additional wastewater from the construction of residential and mixed-use buildings, as well as hotels, marinas and recreational facilities.

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. The point is now being reached where plans will start to be developed and the choices and trade-offs will be committed to in writing. A major effort will be made by the Commission to ensure that these programs are integrated and the problems prioritized. The problems include, but are not limited to nitrogen removal at sewage treatment plants, control of other sources of nitrogen, control of discharges from CSOs, toxics, wasteload allocations (WLAs) and treatment plant capacities.

ISC continued to monitor waste discharges from public and private treatment plants and industrial facilities to check compliance with discharge permit limitations. Several field investigations were also conducted in response to citizens' water pollution complaints. Using the ISC research vessel, the R/V Natale Colosi, the Commission participated in a multi-agency intensive survey in Long Island Sound to document an anticipated hypoxic event.

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. Since September 1987, a staff member has been serving as chairman of the Public Involvement Coordination Group. While dredging is necessary to maintain operations in the port, the Commission has gone on record opposing the use of existing borrow pits for the disposal of dredge spoils but that disposal take place in new borrow pits specifically designed for that purpose.

In October, ISC participated in the New York-New Jersey Environmental Expo '91. An exhibit and information booth was maintained by the staff. The Plenary Session, a discussion of State



and regional environmental programs and policy issues, was chaired by the Commission's Director and the ISC's Vice Chairman from New Jersey addressed the session.

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.

ISC's library holdings continue to be updated and provide an accessible regional depository of air and 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 remained drastically reduced because of budgetary 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. Conditions during the past year did not warrant activation of the system.

This year, the ISC again coordinated the Ozone Health Message System to alert the public of unhealthy ambient air conditions. The Commission provided the region with a single source of precautionary advice on ozone from May to September. 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 to government agencies in the Region.

During the 12 months from October 1990 through September 1991, the Commission received 224 air pollution complaints -- a decrease of 9.3% over the previous 12-month period. This year, all of the calls came from Staten Island residents. It is extremely unfortunate that, due to budget cuts, the Commission was forced to lay off its entire air pollution field staff and close the Staten Island field office in June 1989. The 24-hour-a-day answering service has been maintained and the Commission investi-



gates as many complaints as its resources will allow. ISC also forwards complaints to the appropriate enforcement agencies.

## II. WATER POLLUTION

### GENERAL

During 1991, over \$8.5 billion was allocated for 169 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 \$1.5 billion for 37 completed projects, over \$4.1 billion for 79 projects in progress, and nearly \$2.9 billion for 53 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.

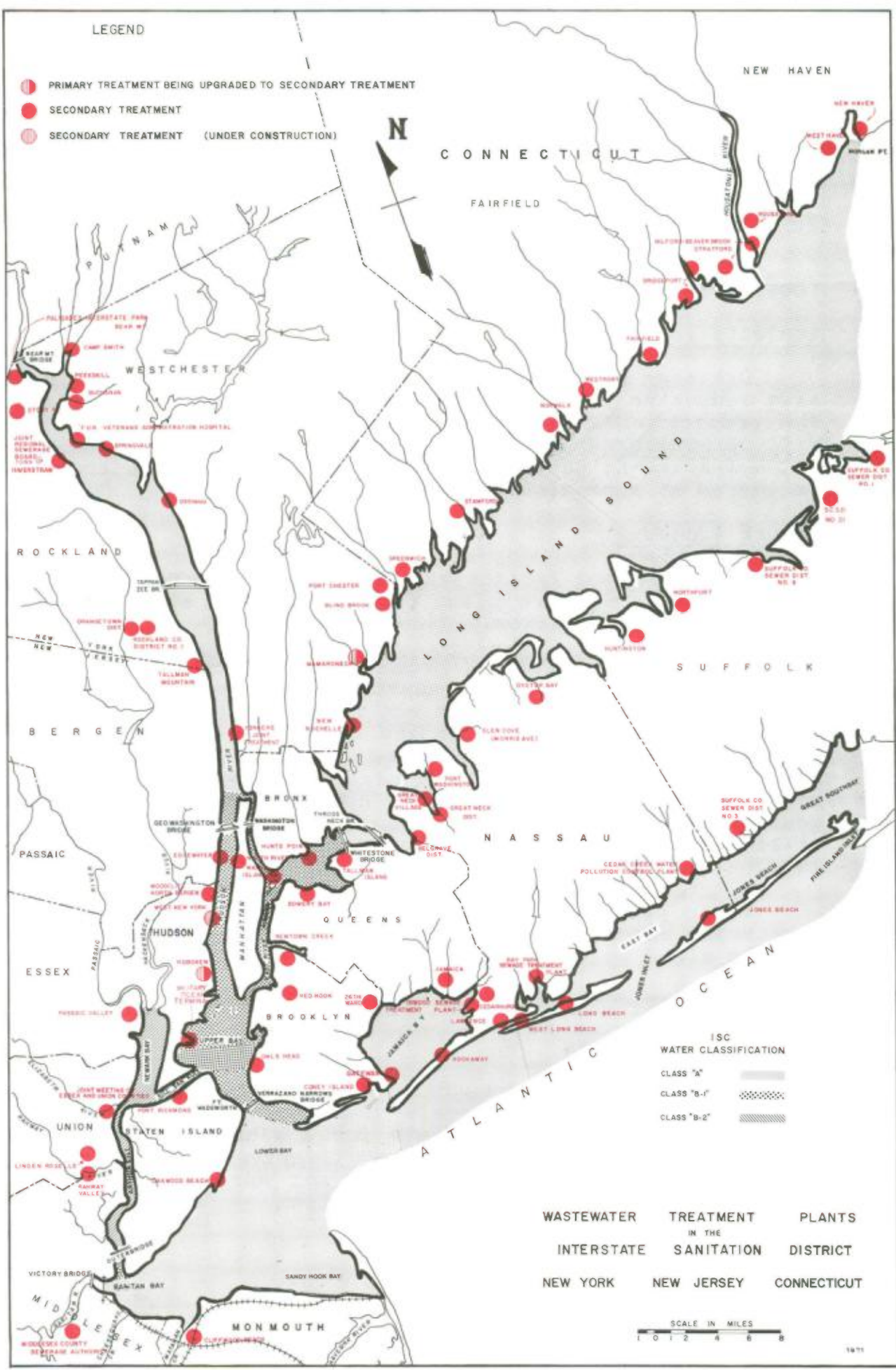
The great amounts of expenditures for water pollution abatement has come to fruition these past years throughout the District, yet there is much room for improvement. It has always been the Commission's contention that receiving water quality can be improved or at least maintained if the infrastructure is in place. During the past four years, fourteen primary facilities region-wide (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 1991.




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.

LEGEND

-  PRIMARY TREATMENT BEING UPGRADED TO SECONDARY TREATMENT
-  SECONDARY TREATMENT
-  SECONDARY TREATMENT (UNDER CONSTRUCTION)



ISC  
WATER CLASSIFICATION

CLASS "A"	
CLASS "B-1"	
CLASS "B-2"	

WASTEWATER TREATMENT PLANTS  
IN THE  
INTERSTATE SANITATION DISTRICT  
NEW YORK NEW JERSEY CONNECTICUT





## CONNECTICUT WATER POLLUTION CONTROL PLANTS

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

#### Completed Projects

Engineering and facilities plans have been prepared for these plants at costs of \$60,000 and \$750,000, respectively.

#### Projects in Progress

Drainage basin improvements which are addressing a massive reduction of combined sewer overflows are 20% complete. The project will eliminate 40 CSOs; the 19 remaining CSOs will be monitored by a remote telemetering system. An operational start-up date has been set for July 1993, with costs estimated at approximately \$27 million.

#### 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 1993. The work will 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 with a construction start-up date set for January 1992.

It is proposed that both plants share sludge disposal facilities which will cost \$22.4 million. Sludge processing will be sited at the East Side plant.

### Greenwich, Connecticut (Fairfield County)

#### Project in Progress

This facility is presently operating under a State Administrative Order to increase treatment capacity. Thirty percent of the work is complete for a plant expansion to a capacity of 12.5 MGD and for rehabilitative work. An operational start-up date has been set for April 1993. Costs have been re-estimated to be \$42 million.

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

Projects in Progress

This facility is operating under a State Consent Order (modified April 19, 1991) to address staff needs and facility maintenance, perform a solids production study, assess incinerator modifications, evaluate design concerns of various plant units and install storm flow diversions.

Final sludge handling is being processed by a private contractor off site for ultimate disposal. Incinerator facilities are temporarily shut down for modifications and up-grading 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 2015 with costs amounting to \$130 million.

An estimate of \$5 million was made for the installation of a third primary tank and baffling of existing primary and secondary clarifiers. The secondary treatment facilities are also being modified to provide for nitrogen removal. Work began on November 1, 1991.

Flow metering of the return activated sludge and storm flow diversions is 80% complete. Costs are estimated at \$160,000.

Norwalk, Connecticut (Fairfield County)

Completed Projects

Engineering studies addressing I/I and facility planning have been completed.

Projects in Progress

This plant is operating under a 1987 State Consent Order to achieve permit requirements.

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

Future Project

A sludge incinerator will be built in 1992 at an estimated cost of \$7.5 million.



Stamford, Connecticut (Fairfield County)

Completed Projects

The addition of a secondary clarifier was completed at a re-estimated cost of \$3.1 million.

Future Project

An estimated \$6 million has been proposed for the reduction of I/I and the installation of an interceptor on Hope Street. Construction is to start during January 1992.

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 under way.

Construction rehabilitation is 20% complete for the installation of fine bubble aeration and repair of gravity thickeners, as well as an effluent aeration tank. Disinfection facilities will be retrofitted with liquid sodium hypochlorite. In addition, comminutors will be replaced by automated bar racks. The cost has been estimated at \$4.3 million.

West Haven, Connecticut (New Haven County)

Projects in Progress

This plant is operating under a State Consent Order to complete necessary plant rehabilitation and eliminate overflows by July 1993.

Several engineering studies are under way to address collection system renovations. All studies are nearly complete accruing a cost of \$75,000.

Seventy five percent of a \$2.4 million upgrade is complete. Work is commencing on the primary and secondary clarifiers, secondary sludge thickeners, and installation of blowers. Bids are presently being received for new instrumentation.

Future Projects

Approximately \$4 million is needed for the installation

*Completed  
I/I  
eliminates illegal  
connections*

*traffles in 2/6  
diffusion system (ceramic)*

*aerated gut chamber \$2.3 mil*



of new equipment for the main station, aerated grit chamber, generators, an ash handling facility, a primary sludge pump system, and a chlorine contact tank. Construction is planned to begin during May 1992.

Collection system rehabilitative work, beginning during May 1992, will address I/I, relief interceptors, and upgrading of pump stations.

Westport, Connecticut (Fairfield County)

Project in Progress

Collection system expansion work has been ongoing for the past six 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.

*completed*

*replaced*

*\$1.1 million for force main  
→ plant*

*→ design for storm water ext. for extra hoodups*

## 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. All flows will be diverted to the Bayshore Regional Sewerage Authority for treatment. A construction start-up date has yet to be determined. An additional \$2.5 million will be needed to install force mains to convey all wastewater flows.

This facility is operating under a State Administrative Consent Order to cease effluent discharges to Whale Creek and Raritan Bay.

Refer to the Bayshore Regional Sewerage Authority write-up for additional information.

### 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 1993 and will cost about \$150,000.

By January 1994, at a cost of \$350,000, force main installations will connect the proposed River Gardens pump station to the Cliffwood Beach sewer system.

This facility is operating under a State Administrative Consent Order to cease discharge of treated effluents to Matawan Creek.

Refer to the Bayshore Regional Sewerage Authority write-up for additional information.

### 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 operational by December 31, 1993.

In order to address collection system logistics, approximately \$1.5 million will be accrued for force main installations.

This facility is operating under a State Administrative Consent Order to cease discharge of treated effluents to receiving waters.

Refer to the Bayshore Regional Sewerage Authority write-up for additional information.

Bayshore Regional Sewerage Authority, New Jersey (Monmouth County)

Future Project

A \$48 million proposal has been prepared for upgrading and expansion to a 16 MGD secondary activated sludge facility utilizing a fine bubble process. The additional capacity will enable Bayshore Regional to treat flows from the three facilities in Aberdeen Township. An approximate construction start-up date is June 1992.

This authority is operating under a State Administrative Consent Order to complete the facility expansion and upgrade. Bayshore Regional discharges to the Atlantic Ocean outside the Interstate Sanitation District.

Edgewater, New Jersey (Bergen County)

Projects in Progress

Several engineering studies are under way or nearly complete which are addressing combined sewer overflows; design plans for pump station #2 rehabilitation, pump station #3 reconstruction, and a sludge pelletizing facility.

Future Projects

Pumping station #2 rehabilitation and equipment replacement will incur costs of about \$300,000. Pumping station #3 reconstruction and trunk sewer installation is estimated to cost one million dollars.

Construction of proposed sludge pelletizing facilities will begin during the summer of 1992. Using a heat processing system, 20% filter cake will be converted to 5% sludge pellets.



## Hoboken, New Jersey (Hudson County)

### Projects in Progress

The Commission, U.S. EPA and NJ DEPE 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 43% complete. The new facility will incorporate trickling filters and ultraviolet disinfection. A re-estimate of over \$98 million has been made for all construction; an operational start-up date has been set for July 1992. The expanded and upgraded plant will also provide treatment for portions of Union City and Weehawken.

A CSO study, which began during August 1991, is expected to be completed in 1995.

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

### Future Projects

Proposed collection system improvements include installation of a new force main on 18th Street, a new CSO outfall and a telemetering system. Engineering studies will address land use, characterization of CSOs and alternatives for solids removal.

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

### Projects in Progress

A sludge dewatering facility is under construction. The \$23 million project is 97% complete.

Improvements to the chlorination and potassium permanganate feed systems are under way at a total estimated cost of \$900,000.

Engineering studies are under way to address the rehabilitation of the primary settling/sludge degritting system and digesters.

## 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

Essentially complete, a land-based solution for sewage sludge disposal has been instituted. At a cost of \$30 million, a belt press sludge dewatering and chemical facility was put on line during March 1991. The final product is being used for intermediate landfill cover and for several other alternatives.

A supplemental outfall to handle peak flows over 144 MGD was installed at a cost of \$30 million.

The Edison pump station was expanded from 45 MGD to 85 MGD at a cost of \$2 million.

Future Project

At an estimated cost of \$15 million, plant expansion work will include the addition of four final settling tanks. Construction is planned for 1992.

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

Completed Projects

This facility completed all modifications to a 2.65 MGD secondary treatment plant utilizing trickling filters during November 1990. Final costs amounted to nearly \$19 million.

Future Project

A sewer line, 1.5 miles long, is proposed for the waterfront area between North Bergen and Edgewater. The \$20 million project has no construction start-up date.

Passaic Valley Sewerage Commissioners, New Jersey (Essex County)

Completed Project

Sludge dewatering facilities were completed and put in service on March 14, 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)

#### Completed Projects

Construction at this facility includes both new units and renovations which are complete or nearly so. A new lime stabilization unit was installed at a cost of nearly \$1.1 million. The installation of an electric motor-driven blower costing about \$690,000 is 95% complete. Rehabilitation of the influent screening system and secondary digester were completed at a combined final cost of \$947,900. An estimated \$27,900 is the cost for rehabilitation of the sludge thickeners; work is 67% complete.

#### Projects in Progress

Several engineering studies are under way which address different aspects of the treatment process including primary building rehabilitations, a sand filter press, a curing bunker for dewatered sludge, and ultraviolet disinfection facilities.

### West New York, New Jersey (Hudson County)

#### Projects in Progress

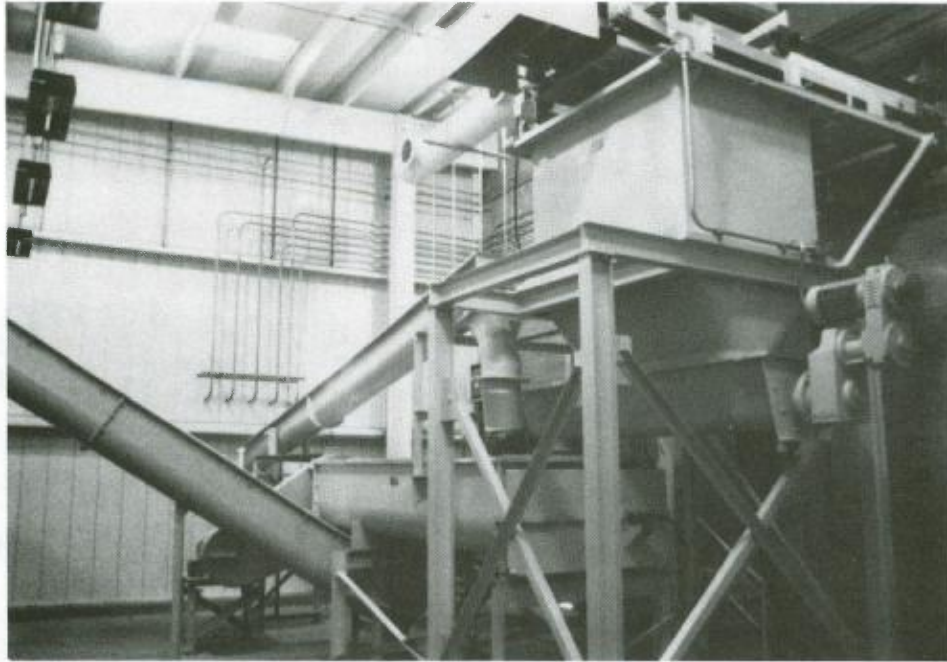
This facility is currently operating under federal and State Consent Orders to attain secondary treatment as well as meet ISC Water Quality Regulations.

On April 1, 1990, construction began on upgrading and facility expansion to a 13 MGD secondary plant utilizing trickling filters. Major units being installed include disinfection facilities, an outfall extension/relocation, rotary screens, and secondary clarifiers. Seventy-five percent of the estimated \$50 million project is complete.

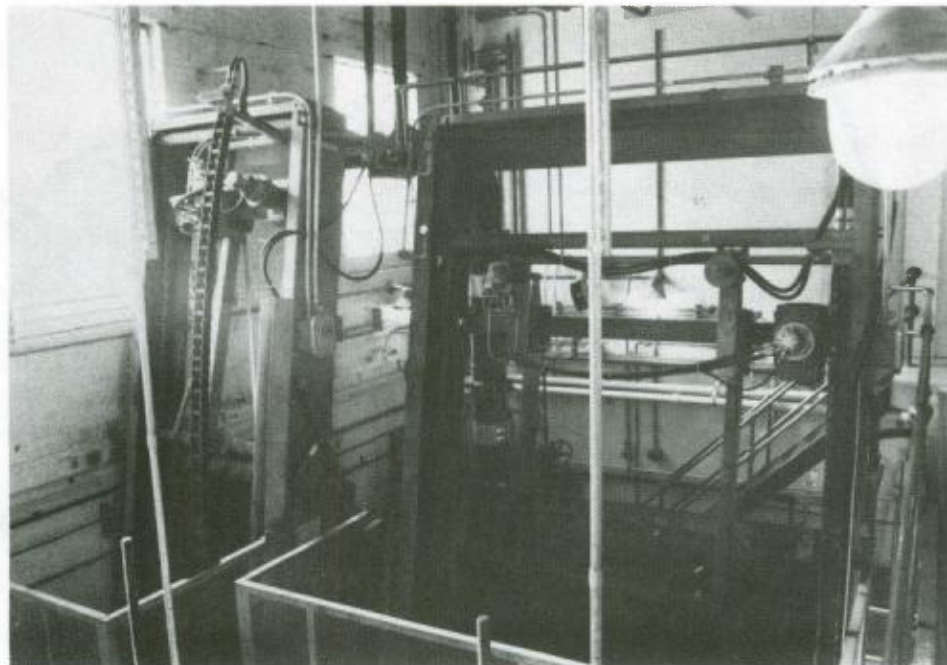
For further information, refer to the Legal Activities section of this report.



Rahway Valley Sewerage Authority  
Union County, New Jersey



Lime Stabilization Facility



Fine Bar Screens

Photos Courtesy of R.V.S.A.

West New York Municipal Utilities Authority  
Hudson County, New Jersey



Refurbished Settling Tanks



Enclosed Trickling Filters



## NEW YORK WATER POLLUTION CONTROL PLANTS

### Arthur Kill Correctional Facility, New York (Richmond County)

#### Future Project

It is proposed that this facility be phased out and divert all flows for treatment at the New York City Oakwood Beach facility; dates and costs are not available.

Refer to the Oakwood Beach write-up for additional information.

### 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.

In order to improve the performance of the fluidized bed reactor system a variety of improvements were made to the oxygen control system (Phase I-C/\$128,000). This work included the installation of multiple dissolved oxygen probes, new supply valves and controllers. The modified instrumentation shall enhance oxygen delivery and control, fostering improved wastewater stabilization.

A storage facility (final part of Phase IIIA) was constructed at a cost of approximately \$766,000 to house various plant equipment. In addition, a new brick facade was installed in the existing aeration building under this phase.

An above ground water storage tank, pump station building and associated piping and controls were constructed under Phase IVA-1 to improve fire protection within the plant. Final costs amounted to nearly \$4 million.

#### Projects in Progress

This facility is operating under a federal and State Consent Decree and Enforcement Action entered July 1989. The provisions include the cessation of sewage sludge disposal in the Atlantic Ocean by December 31, 1991; and to develop and implement long-term alternatives for sewage sludge disposal by December 31, 1994.



An extension to the existing main building to house the generators is under construction. Additional ongoing work includes a new diesel shop, motor control center and associated yard piping. This work is part of Phase IIIC which has an estimated final cost of \$46.3 million.

Work is continuing on two additional phases which are addressing effluent pumping facilities, sludge dewatering facilities, digester gas storage rehabilitation, improvements to the raw sewage pumping and primary treatment facilities. Combined costs will amount to over \$82 million.

#### Future Projects

Currently in the design are plans for additions and modifications to the main building, sludge digestion facilities and a sludge pelletization unit. Cost estimates for this work, excluding the pelletization, will amount to nearly \$60 million.

### Blind Brook, New York (Westchester County)

#### Future Project

The disinfection equipment was modified to use sodium hypochlorite and is presently operational. The final cost was \$115,000.

### Bowery Bay, New York (Queens County)

#### Completed Project

A sludge dewatering facilities plan was completed at a cost of nearly \$5 million.

#### Projects in Progress

An SSES (52% complete/\$2.2 million) and a stabilization study (50% complete/\$212,000) which is an overall plant performance evaluation with recommendations to correct deficiencies are under way.

Dewatering facilities for digested sludge are 43% complete and will cost about \$49 million.

This facility and the thirteen other New York City municipal wastewater treatment plants are operating under an Omnibus State Consent Order (1) to ensure conformance with conditions and limitations of the SPDES permits and (2) to incorporate into the SPDES permits the issues settled by the parties and agreed to by the Administrative Law Judge in the

ongoing permit hearings.

A City-wide CSO abatement program is well under way. 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 a 10 year program (currently in year 4). Ongoing solutions to the problem are being prioritized and initiated. Structural and nonstructural alternatives of eliminating floatables and untreated overflows are being considered.

#### Future Project

Approximately \$35 million will be spent to address all recommendations of the stabilization study.

Collection system renovations will include four tide gate replacements (\$400,000), the installation of five automatic sluice gate operators (\$1.2 million) and the installation of a vortex valve (\$50,000).

#### 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 \$4.1 million. Phased construction contract commitments are expected to be met by 1992.

Essentially complete (90%) are modifications to the primary treatment/expanded sludge facilities (capacity increase to 56 MGD) which include new bar screens, two new grit removal units and a new bulk hypochlorite storage building. Costs accrued are estimated at \$120 million.

##### Future Projects

An expenditure of \$50 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 1992 and operations are expected to start by late 1994.

#### Coney Island, New York (Kings County)

##### Projects in Progress

Several construction phases at this treatment facility have begun and others are well under way; combined, 72% 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, disinfection equipment, final settling and sludge thickening tanks are included in this re-estimated \$631 million project.

See the Bowery Bay write-up for information on the City-wide CSO project and the Omnibus State Consent Order.

##### Future Project

Collection system renovations will include tide gate (2/\$200,000) replacements.

#### F.D.R. Veterans Medical Center, New York (Westchester County)

##### Project in Progress

Five percent of a \$200,000 building renovation is complete.

#### Gateway National Recreation Area (Floyd Bennett Field), New York (Kings County)

##### Project in Progress

Thirty percent of an estimated \$1.5 million rehabilitation is complete.

##### Future Project

Beginning in 1994, a \$1.4 million collection system rehabilitation will get under way to renovate three lift stations and replace 50% of the existing pipes.



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

Project in Progress

This facility is operating under a State Consent Order, initiated May 22, 1990, to investigate and correct violations of SPDES effluent limitations. Currently, investigations have been completed and corrective actions are under way.

Huntington Sewer District, New York (Suffolk County)

Projects in Progress

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

Approximately 40% of a \$450,000 renovation is under way to replace piping and hydraulics.

Hunts Point, New York (Bronx County)

Projects in Progress

A sludge dewatering facility (design complete - \$14.9 million) is 50% constructed. The cost estimate for this facility is \$148.7 million.

A plant stabilization study is under way at a cost of \$280,000.

Collection system renovations include five tide gate replacements (\$500,000), the installation of an automated sluice gate operator (\$250,000) and the construction of two pump stations (\$9.3 million).

See the Bowery Bay write-up for information on the City-wide CSO project and the Omnibus State Consent Order.

Future Project

Approximately \$150 million will be spent to address all recommendations of the stabilization study. An eight year construction plan, beginning in 1995, is being prepared.

Inwood, New York (Nassau County)

Future Project

Proposed improvements include, but not limited to, re-

pairs to digesters and primary sludge piping. Start-up dates have not yet been determined.

#### Jamaica, New York (Queens County)

##### Completed Projects

Engineering studies involving stabilization and sludge dewatering facilities are complete. Final costs accrued were \$220,000 and nearly \$5 million, respectively.

##### Projects in Progress

Estimated at over \$51 million, new primary tanks and associated support equipment are being constructed; the work is 50% complete.

Sludge dewatering facilities are under construction (17% complete) with an anticipated cost of almost \$41 million.

Collection system renovations are under way and include two new pump stations (\$9.6 million) and tide gate replacements (\$100,000).

See the Bowery Bay write-up for information on the City-wide CSO project and Omnibus State Consent Order.

#### Kings Ferry Sewer Association, New York (Westchester County)

##### Future Project

At a proposed cost of \$220,000, rotating biological contactors and associated equipment will be installed.

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

##### Projects in Progress

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

An engineering study is presently under way to address sludge composting capacity.

##### Future Projects

An estimate of \$4 million has been made to upgrade three lift stations, a boiler for gas digestion and a gas mixer.

Refer to the Legal Activities section of this report for additional information.

Mamaroneck, New York (Westchester County)

Projects in Progress

Construction upgrading and expansion to a 20.6 MGD secondary activated sludge plant is 75% complete. This project has been re-estimated to cost \$105 million and is expected to be operational by March 1993.

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.

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

Completed Projects

Over \$5 million was spent to separate stormwater flows from the wastewater influent. An additional \$2.5 million was accrued in order to eliminate roof drains and divert their flows to the storm drainage system.

Project in Progress

This facility is operating under a State Consent Order. A treatment plant evaluation is being conducted in order to determine plant modifications to meet secondary effluent limitations.

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 under way to hook up to the New York City sewer system in the Oakwood Beach drainage basin.

Refer to the Oakwood Beach write-up for additional information.

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 is operating at or above its permitted flow capacity. With anticipated development in the area, there is concern that the plant capacity will be insufficient, 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 90% complete. Further testing and evaluations are to be conducted during the 1992 spring and summer seasons when typical high flow conditions are prevalent. This work is estimated to 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)

#### Completed Projects

Costing \$1.1 million, an upgrading/water quality facility plan was completed.

The replacement of eight tide gates was completed at a cost of \$800,000.

#### Project in Progress

Currently, ten tide gates are being replaced at a total cost of \$1 million. In addition, five automatic sluice gate operators are being installed at a cost of \$500,000.

See the Bowery Bay write-up for information on the City-wide CSO project and the Omnibus State Consent Order.

#### Future Projects

Upgrading construction will incorporate a secondary treatment system utilizing step aeration with a reduced contact time. Construction is expected to begin during 1992 with costs re-estimated to be \$1.1 billion.

The following collection system renovations are planned: 15 tide gate replacements (\$1.5 million), six automatic sluice gate operators (\$600,000), and two pump stations (\$14.345 million). Construction start-up dates are not available.

Approval was received from NYS DEC - Region 2 to expand this plant from 310 MGD to 360 MGD with operations to begin by 2005.

Northport, New York (Suffolk County)

Completed Project

A new pumping station was completed and is in operation; final costs were not available.

Projects in Progress

An I/I study is nearly complete.

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

North River, New York (New York County)

Completed Project

During 1991 this facility began providing secondary treatment. The North River, all construction phases included, has a final cost of \$1.3 billion.

Projects in Progress

The 28 acre rooftop Riverbank State Park will provide a variety of recreational facilities and is scheduled to open by the 1993 summer season. Presently, the second of three phases is under way. All structures are planned to be completed by September 1992. The third phase involves landscaping; over 100 trees have been planted so far. Anticipated final costs for the park will amount to \$138 million.

See the Bowery Bay write-up for information on the City-wide CSO project and the Omnibus State Consent Order.

Future Projects

Proposed collection system renovations include tide gate replacements (\$600,000) and installation of automatic sluice gate operators (\$1.5 million)

Oakwood Beach, New York (Richmond County)

Projects in Progress

Sludge dewatering facilities are under construction.

The work is 50% complete and is estimated to cost over \$59 million. These facilities are expected to be operational during 1992.

Construction of the Mayflower pumping station is complete (February 1991); sewer hookups are under way.

Construction of the West Branch Interceptor System is 75% complete and is expected to be on-line by mid-1993. Costs are estimated to be \$80 million. The Richmond Avenue pumping station foundation has been poured; work is continuing on schedule and is 50% complete. The Hylan Boulevard Interceptor System is presently being installed.

NYS DEC is presently having discussions with NYC DEP to initiate a program whereby NYC DEP would conduct inspections at all package plants on Staten Island. This work was previously done for NYS DEC by the New York City Department of Health. Assessments of O & M, personnel needs, etc. are to be undertaken. The Commission will cooperate with the NYC DEP process control personnel and supply any information that may be needed.

Refer to the Bowery Bay write-up for information on the City-wide CSO project and the Omnibus State Consent Order.

#### Future Project

The Mason Avenue pump station is planned and will cost about \$2.345 million.

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

#### Completed Project

Trickling filter renovations are complete and cost approximately \$1 million.

#### Projects in Progress

A sewer system evaluation survey, which is 35% complete and will cost \$967,000, is scheduled to be completed by September 1992.

#### Future Projects

This facility is operating under a State Consent Order to complete the aforementioned survey and upgrade and expand its capacity to 12.75 MGD. Construction is expected to begin in 1993 and the anticipated cost is \$8 million.



Ossining, New York (Westchester County)

Project in Progress

A \$280,000 rehabilitation project is 75% complete and 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

Over \$400 million is the re-estimated cost to complete upgrade construction. Overall, 70% of the work is complete and includes 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. Final construction phases will address final settling tanks, landscaping and computer controls.

Collection system renovations that are currently under way include tide gate replacements (\$550,000) and pump station upgrading (\$750,000).

See the Bowery Bay write-up for information on the City-wide CSO project and the Omnibus State Consent Order.

Oyster Bay Sewer District, New York (Nassau County)

Project in Progress

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

An estimate of \$4 million has been made for treatment plant expansion to 1.8 MGD. Work is 60% complete and includes new effluent and influent pump stations, chlorine contact tanks, primary and secondary clarifier tanks, and rotating biological discs.

Peekskill, New York (Westchester County)

Project in Progress

At an estimated cost of \$45,000 a new computer data-logger and control system is being installed. The system will monitor over 210 alarms and analog inputs that affect the plant and remote pump stations.

Port Richmond, New York (Richmond County)

Project in Progress

Collection system renovations include tide gate replacements at an estimated cost of \$500,000.

See the Bowery Bay write-up for information on the City-wide CSO project and the Omnibus State Consent Order.

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

Completed Project

Construction is 100% complete for expanding this secondary trickling filter plant from a capacity of 3 MGD to 4 MGD. A final cost of nearly \$16.3 million provided 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.

Red Hook, New York (Kings County)

Projects in Progress

Sludge dewatering facilities are 17% complete and are estimated to cost of over \$10 million.

See the Bowery Bay write-up for information on the City-wide CSO project and the Omnibus State Consent Order.

Future Project

Collection system renovations that are planned include tide gate replacements (\$400,000) and pump station upgrades (\$170,000).

Rockaway, New York (Queens County)

Projects in Progress

Collection system renovations include tide gate replacements at a cost of \$300,000.

See the Bowery Bay write-up for information on the City-wide CSO project and the Omnibus State Consent Order.

Rockland County Sewer District No.1, New York (Rockland County)

Future Project

Starting in 1992, about \$5 million will be spent to install additional piping to provide sufficient capacity during storm events.

Springvale Sewerage Corporation, New York (Westchester County)

Completed Project

At a final cost of \$750,000, upgrading construction was completed during July 1991. Rotating biological contactors, equalization tanks and final settling tanks were installed.

Staten Island University Hospital, New York (Richmond County)

Future Project

It is planned that this facility divert flows to the New York City Oakwood Beach plant for treatment via the Hylan Boulevard Interceptor. Refer to the Oakwood Beach write-up for additional information.

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

Projects in Progress

Rehabilitation of the collection system is 95% complete at an estimated cost of \$500,000.

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. The County is presently seeking NYS DEC - Region 1 concurrence that the Order has been satisfied.

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

Completed Projects

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

An equipment replacement and upgrade is complete; final costs were \$3.2 million.



A federal Administrative Order initiated in 1986 regarding incinerator emissions was satisfied.

#### Projects in Progress

This facility is operating under a State Consent Order to implement improvements and meet secondary effluent limitations.

Phased construction renovations are ongoing throughout the plant. An estimate of \$4.7 million 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 1992.

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

##### Project in Progress

This sewer district is currently operating under a State Consent Order to assure continued compliance and conduct a wasteload allocation study in Port Jefferson Harbor. The County is seeking NYS DEC - Region 1 concurrence that the Order has been satisfied.

#### Tallman Island, New York (Queens County)

##### Projects in Progress

Construction is 45% complete on a \$27.7 million dewatering facility.

See the Bowery Bay write-up for information on the City-wide CSO project and the Omnibus State Consent Order.

#### 26th Ward, New York (Kings County)

##### Projects in Progress

Construction is 50% complete on sludge dewatering facilities which has an estimated cost of nearly \$202 million.

Collection system renovations include tide gate re-

placement (\$100,000) and installation of automatic sluice gate operators (\$500,000).

See the Bowery Bay write-up for information on the City-wide CSO project and the Omnibus State Consent Order.

#### Wards Island, New York (New York County)

##### Projects in Progress

Engineering studies are 50% complete and address plant expansion and a SSES; combined costs are \$2.35 million.

Construction is 55% complete on a \$148.6 million sludge dewatering facility.

See the Bowery Bay write-up for information on the City-wide CSO project and the Omnibus State Consent Order.

##### Future Projects

Collection system renovations will include 23 tide gate replacements (\$2.3 million) and installation of 5 automatic sluice gate operators (\$1.25 million).

A plant upgrading and expansion to a capacity of 309 MGD is anticipated to begin during 1993; costs are estimated at \$750 million.

#### Yonkers, New York (Westchester County)

##### Completed Project

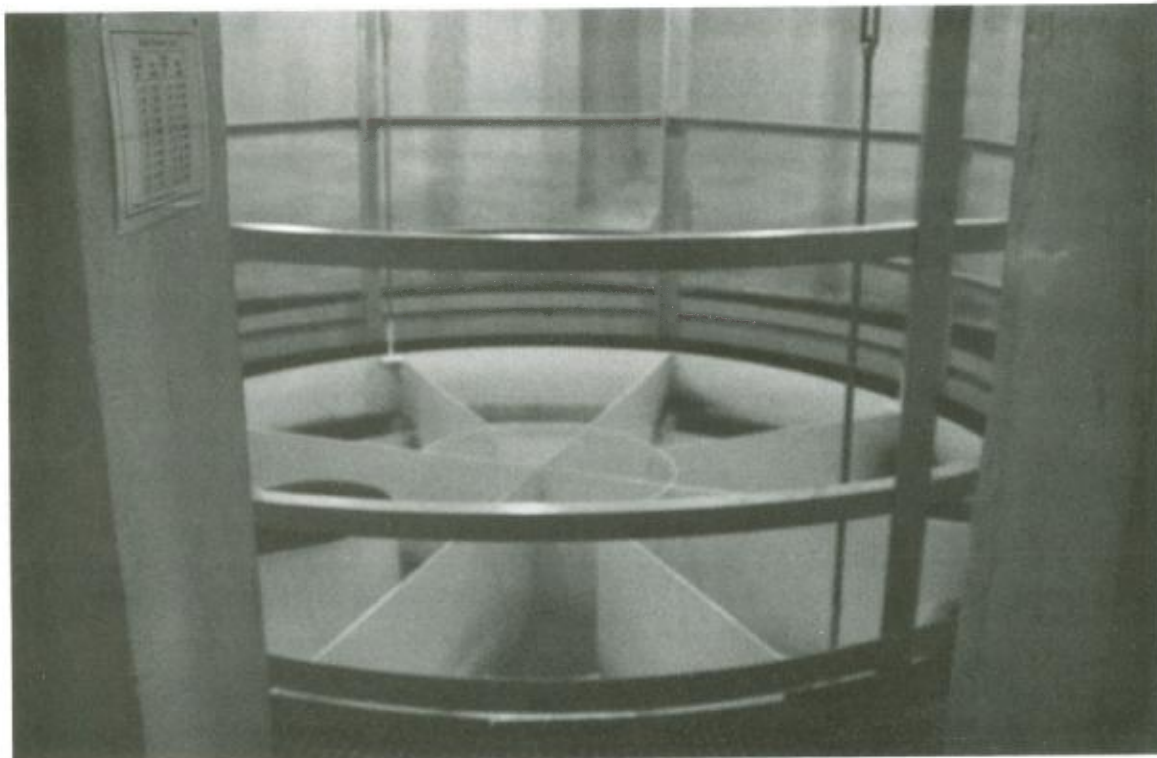
A sludge dewatering facility is complete. The facility, which has a re-estimated cost of \$16 million, was operational during December 1991. Four solid bowl centrifuges will treat about 350,000 gallons a day.

##### 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 (40% complete) 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.

Yonkers Joint Wastewater Treatment Plant  
Westchester County, New York



North Yonkers Pumping Station  
Swirl Concentrator

Installed as part of the Combined Sewer Overflow and Regulator Rehabilitation Project, Phase I, this is one of three swirl concentrators put into service during 1990 at the North Yonkers Pumping Station. When the capacity of the station is exceeded during storm events, the excess flow is diverted to the swirl concentrators which have a combined maximum capacity of 77 MGD. The swirl concentrators effectively remove floatables and settleable solids; and the flow is then disinfected before being discharged to the Hudson River. Solids are transported by force main for treatment at the Yonkers Joint Wastewater Treatment Plant.



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 and is 75% complete.

This facility is operating under a federal Consent Order to stop ocean dumping of sewage sludge by December 31, 1991. A NYS DEC Consent Order is in effect to complete a SSES and an odor study.

#### Future Project

A diesel engine-driven process air blower will be replaced by an electrical unit at a cost of \$3 million.

## 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 continued to conduct a considerably reduced number of investigations and effluent sampling surveys due to budget constraints and a reduced staff. Samplings and inspections were conducted by field personnel at industrial, municipal and private wastewater treatment facilities, as well as an intensive survey in Long Island Sound. 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 utilized for an intensive survey in Long Island Sound to document hypoxic (low dissolved oxygen) conditions. This survey was conducted from late July through mid-September in cooperation with several other agencies.

During the course of the year, ISC's field inspectors conducted investigations in response to citizen complaints of water pollution. ISC worked with the appropriate agencies to resolve the problems in the most expeditious manner.

ISC field and laboratory records for the treatment facilities located in Long Beach, New York and West New York, New Jersey were subpoenaed. These records document effluent compliance and operating data. The ISC holdings, in many cases the sole source of this information, are being used for enforcement and or criminal actions. Refer to the Legal Activities section of this report for detailed information.

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 with ISC Water Quality Regulations and with each facility's discharge permit.



## SPECIAL INTENSIVE SURVEY

### 1991 Ambient Water Quality Monitoring in Long Island Sound to Document Anticipated Hypoxic Conditions

Because of unusually high water temperatures in Long Island Sound at the end of June, the New York State Department of Environmental Conservation (NYS DEC) requested the Commission to perform an intensive sampling survey to help document anticipated hypoxic conditions. This sampling was conducted as a cooperative effort with other agencies to address an immediate need for weekly data in Long Island Sound for temperature, salinity, dissolved oxygen and chlorophyll a. The other agencies taking part in the sampling were the CT DEP, NYC DEP, Westchester County Department of Health and Nassau County Department of Health. This ISC sampling effort filled in existing monitoring gaps and provided a consistent weekly data base for the western portion of Long Island Sound.

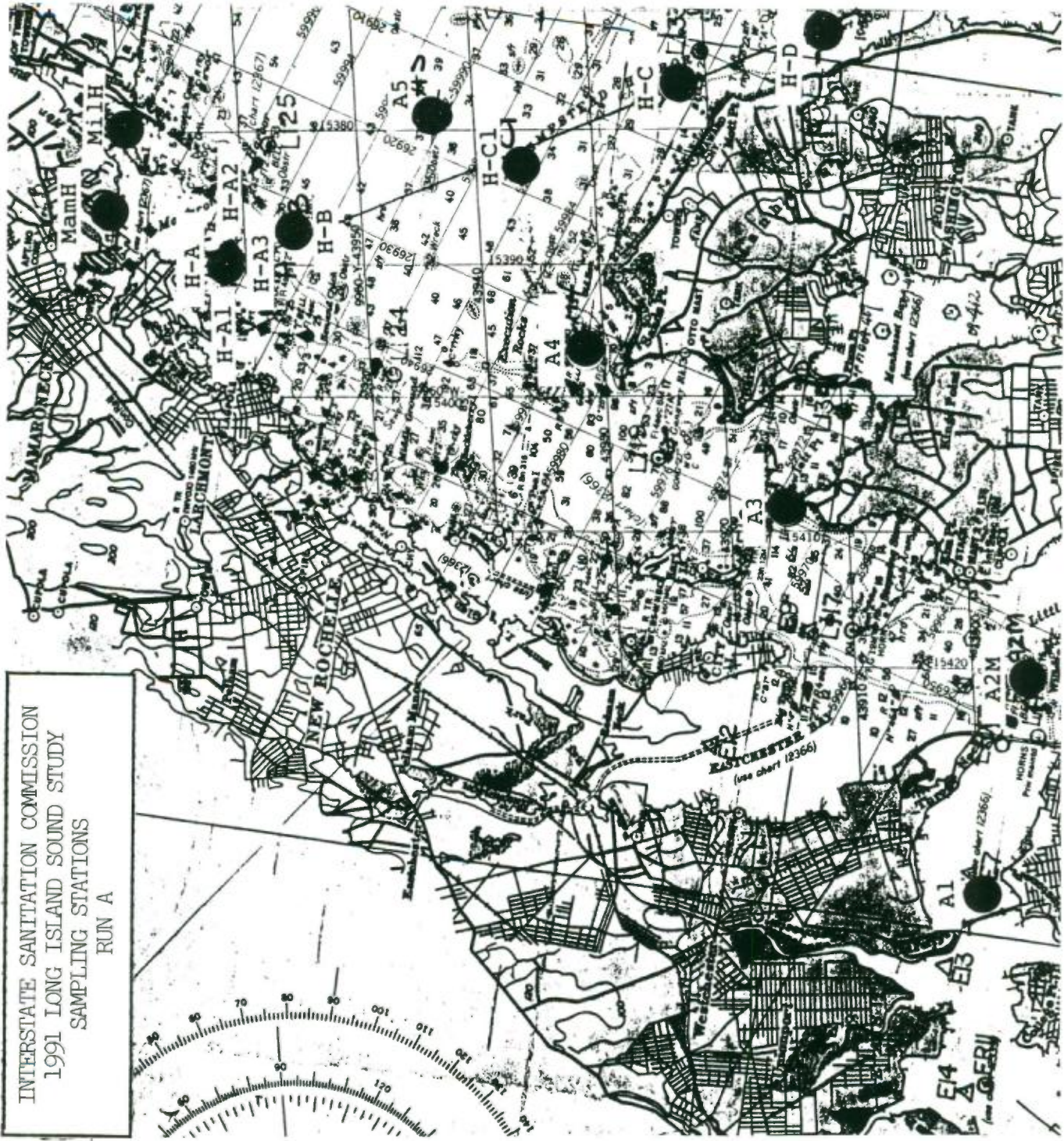
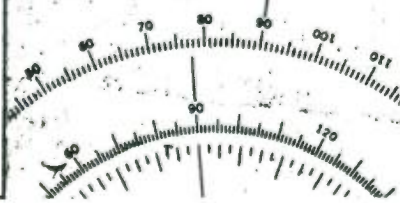
The 25 sampling stations sampled by the Commission were determined after conversations with the New York State Department of Environmental Conservation, Division of Marine Resources. NYS DEC agreed to coordinate the sampling effort among the study participants and to receive and assemble all data. The spatial and temporal coverage of the sampling area was coordinated among the study participants by NYS DEC.

All sampling, sample preservation and analyses were done according to procedures accepted by the U.S. EPA. Top (one meter below the surface) and bottom (one meter above the bottom) samples for temperature, salinity and dissolved oxygen were taken at all stations on all sampling runs. Top samples for chlorophyll a were taken at all stations on every other run. In order to sample all stations, the stations (see maps and listing of station locations on the following pages) were divided and sampled on successive days each week. A total of seven weekly sampling runs (25 stations on two days each week) was conducted from late July 1991 through mid-September 1991 utilizing the ISC research vessel, the R/V Natale Colosi. The results of all analyses were summarized and forwarded to NYS DEC biweekly.

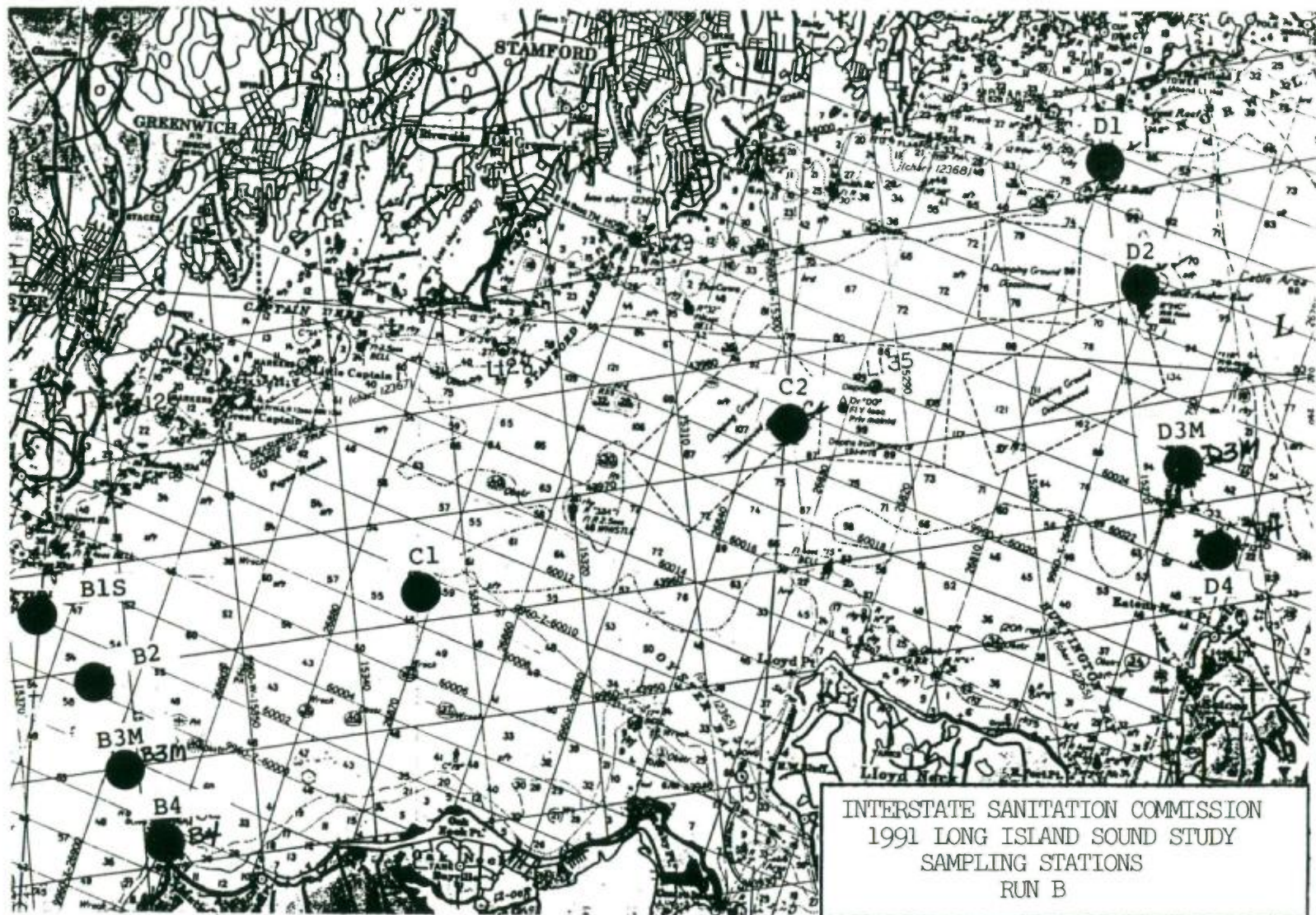
In the area sampled by the Commission, hypoxic conditions existed in the bottom waters of western Long Island Sound until Hurricane Bob hit the area on August 19th. After the hurricane, the dissolved oxygen in the bottom waters greatly improved above hypoxic conditions. With funding from U.S. EPA headquarters, summertime dissolved oxygen contour maps will be developed for the period of 1986 through 1991. The funds will also be used to produce a report on the analysis of the 1991 monitoring.



INTERSTATE SANITATION COMMISSION  
1991 LONG ISLAND SOUND STUDY  
SAMPLING STATIONS  
RUN A









INTERSTATE SANITATION COMMISSION

1991 LONG ISLAND SOUND STUDY SAMPLING STATIONS

STATION	WATER COLUMN DEPTH (meters)	LOCATION					
		LATITUDE NORTH			LONGITUDE WEST		
		D	M	S	D	M	S
A1	26	40	48	12	73	49	36
A2M	35	40	48	06	73	47	00
A3	25	40	50	30	73	45	18
A4	35	40	52	18	73	44	06
A5	13	40	53	54	73	41	12
B1S	15	40	56	42	73	40	00
B2	20	40	56	06	73	39	12
B3M	19	40	55	12	73	38	42
B4	15	40	54	24	73	38	06
C1	19	40	57	18	73	34	48
C2	35	40	59	06	73	30	00
D1	21	41	02	06	73	25	54
D2	28	41	00	54	73	25	18
D3M	29	40	59	00	73	24	24
D4	13	40	58	06	73	23	54
MamH	5	40	56	27	73	42	55
MilH	3	40	56	38	73	41	59
H-A	9	40	55	18	73	43	30
H-A1	6	40	55	36	73	43	24
H-A2	5	40	55	42	73	43	24
H-A3	3	40	55	24	73	43	12
H-B	12	40	54	48	73	42	54
H-C	8	40	51	54	73	40	30
H-C1	11	40	53	12	73	41	42
H-D	7	40	50	42	73	39	36

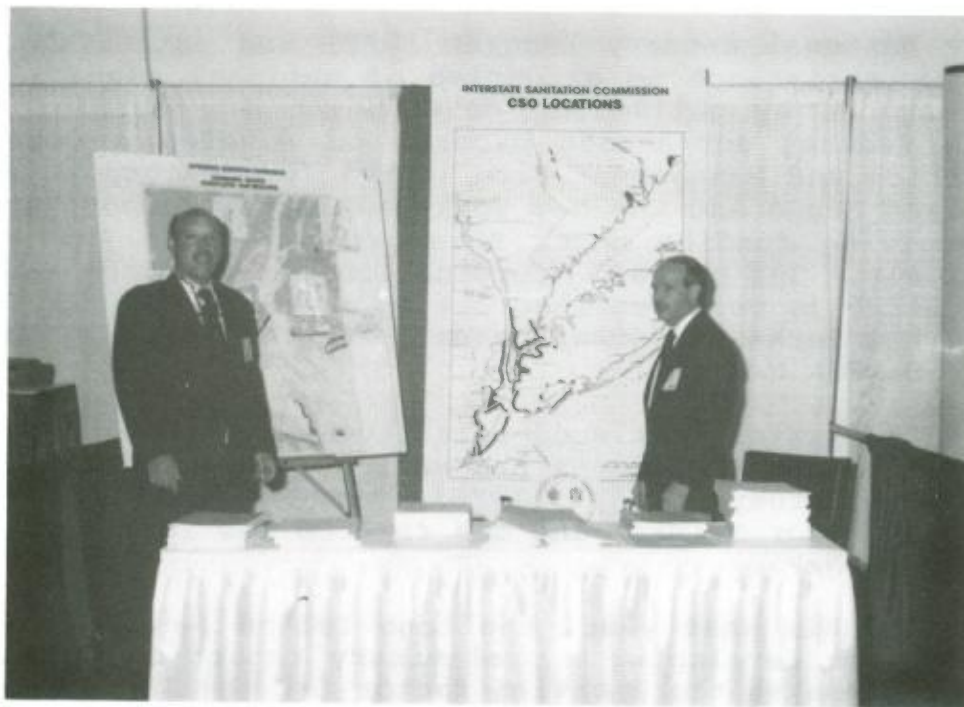
## NEW YORK - NEW JERSEY ENVIRONMENTAL EXPO '91

The second annual New York - New Jersey Environmental Exposition was held at the Meadowlands Convention Center, Secaucus, New Jersey on October 8th through 10th, 1991. A program of technical sessions focused mainly on management, remediation and enforcement strategies for air, groundwater, hazardous wastes, potable water, solid waste, and fresh and saline waters. An exhibit hall was open concurrently and contained displays and information from a cross section of governmental agencies and companies which provide services and products throughout the United States.

The Commission's exhibit and information booth was well attended and received. A great deal of interest was shown for ISC's displays which depicted the locations of CSO outfalls and the status (open or closed) of metropolitan beaches and shellfish beds.

The Plenary Session was chaired by the Commission's Director and the topic of discussion was State and regional environmental programs and policy issues. The panel members had a wide range of views, as they represented the U.S. EPA, the ISC, the New York State Department of Environmental Conservation, the New York City Department of Environmental Protection and the Association of Environmental Authorities (New Jersey). The panel addressed achievements, programs and oversight responsibilities affecting agency mandates, as well as future directions.

New York-New Jersey Environmental Expo '91  
Secaucus, New Jersey



Interstate Sanitation Commission  
Exhibit and Information Booth



Vice Chairman Pecci  
Addressing Plenary Session



## 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 federal assistance program to develop a Comprehensive Conservation and Management Plan (CCMP) for designated estuaries. Long Island Sound and the New York-New Jersey Harbor Estuary have been receiving funding under this program since 1985 and 1988, respectively. 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 Commission continued to actively participate as a member of the Management Committees and various work groups for the Long Island Sound Estuary Study (LISES), the New York-New Jersey Harbor Estuary Program (HEP) and the related New York Bight Restoration Plan (NYBRP).

During this past year, the Long Island Sound Estuary Study has focused on developing a preliminary report on hypoxia, identified nitrogen as the limiting factor for the low dissolved oxygen values and 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 point is now being reached where plans will start to be developed and the choices and trade-offs will be committed to in writing. A major effort will be made by the Commission to ensure that these programs are integrated and the problems prioritized. The problems include, but are not limited to nitrogen removal at sewage treatment plants, control of other sources of nitrogen, control of discharges from CSOs, toxics, wasteload allocations (WLAs) and treatment plant capacities.

As a member of the Management Committees and various work groups for the three aforementioned studies, ISC is aware of the data gaps/deficiencies that exist both for ambient waters and for point and nonpoint sources. Besides coordinating with these programs, which also have representation from ISC's three member states, the Commission will continue to coordinate its sampling activities and schedules with the environmental departments of its member states in order that the needs of the region are best met with the limited resources of all agencies.

## COMBINED SEWER OVERFLOWS

As a follow-up to the Commission's CSO report and the first region-wide CSO Planning Conference of earlier years, and to ongoing technical meetings with the state environmental departments and the U.S. EPA, the Commission will continue to investigate which pollutants are amenable to control at CSOs and contribute to strategies within the region for CSO abatement. Without violating the CSO strategies of its member states and the U.S. EPA's national CSO strategy, the Commission's aim is to insure compatible region-wide CSO requirements. Regular meetings will be continued with the environmental departments of the states and the U.S. EPA.

The Commission worked with the state environmental departments in an effort to eliminate all dry weather discharges from combined sewer overflows (CSOs) in the District. Upon discovery of any dry weather discharges from CSOs, the Commission notified the appropriate state environmental department of the discharge and worked with that department to determine the most expeditious manner to eliminate the violation. This effort will be continued and, as appropriate, ISC will follow its administrative procedures in carrying out this activity.



## OPENING WATERS FOR SWIMMING

Opening presently closed areas for swimming continues to be a high ISC priority. The results of ISC's 1990 Hudson River coliform survey showed that further remedial actions must take place before the waters can reach the quality required for swimming. The Commission will continue to emphasize the need for CSO, stormwater and nonpoint runoff control to allow swimming in those areas of the District, such as the Hudson River and Raritan Bay, that are so classified. ISC will concentrate on ensuring that the ongoing National Estuary Studies in this region are integrated and the problems prioritized.

The Commission met with representatives of the New York State Office of Parks, Recreation and Historic Preservation; the Palisades Interstate Park Commission; the New York State Department of Environmental Conservation and the New York State Department of Health. The majority of the meeting participants agreed that the work would be beneficial and that ISC should proceed.

To address the CSO, stormwater and nonpoint runoff problems related to opening areas in its District for swimming, the Commission will address two major components:

- a. determining the geographic area that control from the various sources is necessary and the coliform reductions required from discharges in order for the waters to meet swimming criteria, and
- b. coordinating the CSO remediation efforts among the appropriate state and federal agencies and the affected municipalities and/or sewage authorities in order to achieve the desired results in the shortest possible period of time.

The first component involves the use of the most up-to-date version of the steady state mathematical water quality model developed for the New York-New Jersey Harbor area, which includes the surrounding waters. The volumes and coliform content of the discharges will be obtained from existing information. The model will then be run under different scenarios to determine the geographic area and the extent of coliform reductions necessary to meet swimming criteria. Lesser coliform control will most likely increase the geographic area that must be controlled. It will be necessary to balance the degree of control versus the geographic area to be controlled in order to determine the best plan for remediation.

Once a remediation plan is determined, it will be necessary to coordinate the corrective actions that the affected municipalities and/or sewage authorities must undertake in order to obtain



the desired results -- swimming in the target areas -- in the shortest possible period of time at the least cost. If the remediation activities are not coordinated among the entities involved, the time required to achieve swimming can be increased by years, at a minimum, and possibly decades in some areas if key players delay doing the necessary work.

The Commission recognizes that a time variable model is presently under development and is expected to be completed by the end of 1992. This new model will be able to predict the effects of individual storms, something that the present steady state model cannot do. When the new model becomes available, additional model runs will be performed to determine whether the conclusions reached using the steady state model -- which will yield the most favorable results -- will have to be adjusted. Throughout this project, ISC will seek input from the involved agencies.

## OPENING WATERS FOR SHELLFISHING

It is an ISC goal to keep open the waters in the District that are used for shellfishing and to get presently closed areas open for shellfishing. To that end, the Commission will continue to work with the states' environmental and/or health departments to determine the areas that must be sampled to remain open or to be opened. The Commission will continue to coordinate with its three member states and commit available resources to sampling and analyses for this purpose. The areas include those used (or to be used) for direct harvesting, depuration and transplant (re-lay).

### 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 1991, the ISC continued to receive air pollution complaints, especially from Staten Island. For the 12-month period ending September 30, 1991, a total of 224 air pollution complaints were received; a decrease of 9.3% from that of the previous 12-month period.

For the fourth consecutive year, the Commission coordinated the regional Ozone Health Message System that is activated 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 all member States.

Pollutant values and meteorological conditions did not warrant activation of the High Air Pollution Alert and Warning System in the New Jersey-New York-Connecticut Control Region, 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. Unfortunately, the Commission was forced to lay off its entire air pollution field staff; those staff positions remain vacant. The 24-hour-a-day answering service has been maintained and all complainants are contacted during regular office hours. Whenever available, ISC personnel are dispatched to investigate complaints. If ISC personnel are not available and whenever ISC finds the possible source, the appropriate enforcement agencies are contacted to perform follow-up.

For the 12-month period ending September 30, 1991, the Commission received a total of 224 complaints. This represents a decrease of 9.3% 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.

Thirty Staten Island communities were the source of at least one complaint to the Commission during the October 1990 - September 1991 period. New Springville reported more odor complaints than those of any other Staten Island community for the sixth consecutive year. Twenty-four complaints (10.7% of the total) were reported from New Springville. Nine communities -- Tottenville, Mariner's Harbor, Huguenot, West New Brighton, Sunny Side, Travis, Great Kills, Annadale, and Richmond/Richmondtown -- reported between 10 and 22 complaints during the 12-month period. No complaints were registered from the four other boroughs of New York City or from elsewhere in the ISC District.

Based on the descriptions reported by the citizens, odors were classified into eleven categories as shown in the table. The "chemical" and "others" categories were most frequently reported with 59 and 62 complaints, representing 54% of the total. It should be noted that the "chemical" category represents odors that could not be more specifically identified by the complainants. "Garbage odor" was reported in 9.4% of the complaints, a decrease from 24.7% compared to the previous 12-month period.

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY COMMUNITY ON  
STATEN ISLAND FROM OCTOBER 1990 TO SEPTEMBER 1991

COMMUNITY	COMPLAINTS	
	NUMBER	% OF TOTAL
New Springville	24	10.7
Tottenville	22	9.8
Mariner's Harbor	18	8.0
Huguenot	14	6.3
West New Brighton	14	6.3
Sunny Side	12	5.4
Travis	12	5.4
Great Kills	11	4.9
Annadale	10	4.5
Richmond/Richmondtown	10	4.5
Willowbrook	9	4.0
New Dorp	8	3.6
Grasmere	7	3.1
Westerleigh	7	3.1
Bull's Head	6	2.6
Oakwood	5	2.2
All Others *	35	15.6
TOTALS	224	100.0

\* Represents 14 communities from which four or fewer complaints were reported per community.

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY TYPE OF ODOR  
 FROM STATEN ISLAND COMMUNITIES  
 FROM OCTOBER 1990 TO SEPTEMBER 1991

TYPE OF ODOR	COMPLAINTS	
	NUMBER	% OF TOTAL
Sulfur/Eggy	22	9.8
Garbage	21	9.4
Oil/Gasoline	21	9.4
Sewage	15	6.6
Burning Rubber/Plastic	11	4.9
Cat Urine	8	3.6
Natural Gas/Gassy	3	1.3
Soap/Detergent	1	0.5
Dead Fish/Fishy	1	0.5
Chemical	59	26.3
Others*	62	27.7
TOTALS	224	100.0

\* Represents 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 1990 TO SEPTEMBER 1991

MONTH	NUMBER OF COMPLAINTS				
	Time of Complaints*			TOTAL	% OF TOTAL
	Midnight to 8:00 AM	8:00 AM to 4:00 PM	4:00 PM to Midnight		
October 1990	3	7	2	12	5.4
November 1990	1	5	7	13	5.8
December 1990	2	10	6	18	8.0
January 1991	4	6	6	16	7.1
February 1991	3	4	3	10	4.5
March 1991	6	3	4	13	5.8
April 1991	3	10	8	21	9.4
May 1991	4	11	11	26	11.6
June 1991	8	11	19	38	17.0
July 1991	6	2	7	15	6.7
August 1991	7	8	12	27	12.0
September 1991	4	9	2	15	6.7
TOTALS	51	86	87	224	
% OF TOTAL	22.8	38.4	38.8		100

\* Includes Weekends and Holidays

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY DAY OF WEEK  
 FROM STATEN ISLAND COMMUNITIES  
 FROM OCTOBER 1990 TO SEPTEMBER 1991

MONTH	NUMBER OF COMPLAINTS						
	Day of Complaints*						
	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
October 1990	1	3	3	3	1	0	1
November 1990	3	1	1	1	2	3	2
December 1990	3	0	1	4	3	7	0
January 1991	5	0	4	1	2	1	3
February 1991	1	3	2	0	2	2	0
March 1991	1	1	1	1	4	4	1
April 1991	7	7	2	2	0	0	3
May 1991	10	1	3	4	5	2	1
June 1991	5	5	8	7	6	5	2
July 1991	2	1	2	3	0	4	3
August 1991	8	5	1	4	3	3	3
September 1991	2	4	0	4	2	2	1
TOTALS	48	31	28	34	30	33	20
% OF TOTAL	21.4	13.8	12.5	15.2	13.4	14.7	9.0

\* 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 38.8% were reported between 4:00 P.M. and midnight and 38.4% between 8:00 A.M. and 4:00 P.M. This response is consistent with the previous 12-month period. The majority of complaints have been registered between 4:00 P.M. and midnight every year since 1984.

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 48 calls, or 21.4% of the total, on Mondays to a low of 20 calls, or 9.0% 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. The table also shows that at least 10 complaints per month are logged and that a high of 38 were received during June 1991.



## OZONE HEALTH MESSAGE SYSTEM

For the fourth 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 services, 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 counties 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 public is advised against strenuous outdoor activities and physical exertion such as jogging, ball playing, and running.

## 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 1991, the Commission continued its participation in two multi-party federal court cases in New Jersey District Court, two administrative hearings concerning New York State Pollutant Discharge Elimination System (SPDES) permits issued to municipal wastewater treatment plants, as well as an Article 78 Proceeding in Westchester County, New York. As the Commission was poised to seek party status in an administrative hearing in New Jersey regarding the proposed operation of a hazardous waste incinerator, it became known that the proceeding was only to be concerned with the intrastate siting of the facility. Hence, the ISC will intervene at an appropriate time, if siting is approved, to insure compliance with its regulations and to address the cumulative impact on regional air quality.

The Justice Department in New Jersey and New York sought and received the Commission's cooperation in two investigations. The Commission documents and records were an aid in attaining a conviction in the New Jersey case. The investigation in the United States Attorney's Office, Eastern District is continuing.

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

This suit (Township of Woodbridge v. City of New York, Civil No. 79-1060) relates to the waterborne debris that enters the District waters as a result of the garbage unloading operation at the Fresh Kills Landfill.

In 1986, the ISC intervened in an action in New Jersey Federal District Court initiated by the Township of Woodbridge, New Jersey in 1979. Approximately 13 Court Orders were issued in the intervening years prior to ISC's cross-motion for contempt in September 1987. After investigations were conducted by Commission field inspectors, it was determined that in spite of the Orders issued and the steps taken by the City, the problem of debris from the landfill operations entering adjacent waterways persisted in contravention of the ISC Water Quality Regulations. As a result of the Contempt Citation sought by the Commission and issued by the Judge, 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 super-boom; and the hiring of an independent monitor. The Order also provides for an Independent Consultant to evaluate 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 who found that while debris continued to enter the waterway, the parties could wait for the January 1, 1990 consultant's report.

The Independent Consultant's reports during 1990 recommended containerization and a single-barge enclosed unloading system as alternatives. The City concluded that of the final alternatives reviewed, the single-barge enclosed unloading facility presented the most effective and practical method to comply with the Consent Order and proposed to implement it.

The ISC submitted a revised Consent Order to the parties in January 1991. The revisions, among other things, concerned the retention of the Independent Monitor for as long as the current system will be utilized, an accelerated schedule for implementation of the single-barge enclosed unloader, an evaluation of the need for a second unloader within a reasonable time and the continuation of the stipulated penalty provisions of the Consent Decree.

As of June, the parties had not reached final agreement on three issues: (1) inclusion of stipulated penalties, (2) language regarding the effectiveness of the unloader at keeping debris out of the water, and (3) language proposed by New Jersey regarding containerization. By December 1991 the plaintiffs had nearly resolved the remaining issues except for stipulated penalties. In lieu of stipulated penalties, the ISC has sought assurances from the City that monies would not only be set aside, but dedicated solely to the design and construction of the single-barge enclosed unloading system. The Commission is awaiting a response to its latest proposal from the City of New York.

#### LITIGATION AGAINST HUDSON COUNTY MUNICIPALITIES

Litigation (U.S., ISC v. Hoboken, et. al, Civil No. 79-2030) was initiated in Federal District Court in New Jersey 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, suing to enforce its own Water Quality Regulations which set effluent limits for certain pollutants, such as BOD, TSS and fecal coliform bacteria. ISC moved against the defendants seeking a finding that the de-



defendants were liable under the Clean Water Act and the Tri-State Compact for Pollution Abatement (entered into by New Jersey, New York and Connecticut) for failure to abide by ISC's Water Quality Regulations. ISC sought a ruling that the defendants were liable under the Clean Water Act for exceeding discharge limits imposed by the U.S. EPA and NJ DEPE (formerly NJ DEP) acting under federal authority in the form of a National Pollutant Discharge Elimination System (NPDES) permit. In accordance with the Clean Water Act, the Commission's regulatory standards are set forth in the NPDES permits issued by the State of New Jersey as a designated permit authority. Such permits make the Commission's standards enforceable NPDES restrictions and a violation of the Clean Water Act. In 1987, the court granted plaintiffs' motions for partial summary judgement on the issue of liability against defendants Bayonne, West New York, and North Bergen. The judge held that the NPDES permits did not extend the municipalities' deadline for abiding by interim standards rather than secondary limits. 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-plaintiffs, 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.

#### North Bergen

Following consultations with the U.S. EPA and the U.S. Attorney's Office in January 1991, ISC informed the North Bergen Municipal Utilities Authority (NBMUA) that the plaintiffs granted the Force Majeure requests and extended the final compliance date to February 1, 1991. The compliance schedule in the Consent Order had required that the facility be upgraded to secondary treatment by September 1, 1990, and secondary limits be attained by December 1, 1990. At the same time, the defendants were also advised that while stipulated penalties for failure to submit monthly reports would not be waived, they would be reduced to \$12,400. In accordance with the Consent Order, 40% of the penalties were paid to the ISC on January 16, 1991. In March 1991, the Commission, on behalf of the plaintiffs, denied the defendants request for an extension of the February 1, 1991 final compliance date. The defendants had relied on the indictment of the NBMUA's licensed operator for falsifying the data at another sewage treatment plant. The extension was denied because no evidence was submitted to indicate a similar pattern of fraud at the North Bergen plant. Moreover, the upgrade was completed by February 1991. The Commission conducted an effluent survey of the plant in March to determine whether the discharge from the NBMUA's Woodcliff treatment plant was in compliance with ISC's effluent requirements. Monthly self monitoring progress reports

submitted through July show that the plant has also achieved the final limits for BOD and TSS as required by secondary treatment. NBMUA has now implemented the terms of the Consent Order.

#### West New York

By a Consent Decree of October 29, 1990, West New York Municipal Utilities Authority (WNYMUA) agreed to undertake a construction program to complete the upgrade of its treatment facility by April 9, 1992, and to meet final permit limits by July 9, 1992. After reviewing monthly process reports for December 1990 and January 1991, the Commission, on behalf of the plaintiffs, issued a Notice of Noncompliance and a demand for stipulated penalties of \$142,500. WNYMUA submitted various Force Majeure requests regarding their ongoing violations. In July 1991, ISC informed the WNYMUA that based upon a legal and technical review, the violations were not caused by a Force Majeure event, and that they now owed \$307,000. In August the defendants invoked the Dispute Resolution clause of the Consent Decree and filed a motion with the court. The court instructed the parties to attempt to resolve the matter before involving the court.

The parties met in September and November to attempt to reach a "global" settlement including NJ DEPE. There are two Consent Orders that apply to the upgrade of WNYMUA to secondary treatment, both federal and State. Notably, NJ DEPE had cited the WNYMUA for violations of interim limitations which also violated the federal Consent Order. Moreover, the State of New Jersey, a necessary defendant to the case, is a signatory to the federal Consent Order.

The parties have reached an agreement in principal with WNYMUA and are working out the details of a settlement. Among the things being taken into consideration is the WNYMUA's accelerated schedule to complete the upgrade by December 1991.

#### Hoboken

This Consent Decree was entered with the court on January 30, 1991. A fine of \$225,000 was paid to the U.S. Treasury in April 1991.

After ISC reviewed monthly progress reports and a request by Hoboken-Union City-Weehawken Sewerage Authority (HUCWSA) to revise the interim TSS limits, the defendants were notified that they were not fulfilling the reporting requirements of the Consent Decree and would be subject to penalties. The ISC has requested additional documentation and is in the process of reviewing HUCWSA's request regarding the TSS limits.



## NEW YORK CITY SEWAGE TREATMENT PLANT PERMIT HEARINGS

The ISC brought suit in State Supreme Court in Queens County in November 1989 (ISC v. Jorling), over the NYS DEC - Region 2's failure to hold a hearing prior to issuing SPDES permits for wastewater discharges from 14 sewage treatment plants operated by the City of New York Department of Environmental Protection (NYC DEP). 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.

Of the four issues (toxic effluent standards, industrial pretreatment, untreated discharges, and plant capacity) certified in the judge's 1989 preliminary ruling, two (toxic effluent standards and industrial pretreatment) had reached resolutions by mid-year and negotiations continued on the remaining issues. Nutrient removal became a fifth issue joined for adjudication following an appeal of its exclusion by the Administrative Law Judge (ALJ). On January 31, 1991, the NYS DEC Commissioner's interim decision overruled the ALJ's decision and found that nitrogen and nutrient removal were proper issues for adjudication, and upheld the ALJ's ruling that including the Commission's Water Quality Regulations would result in a permit that comprehensively detailed all applicable standards. In November 1991, the ALJ ruled that the language proposed by the Commission for inclusion of the ISC's regulations be incorporated into the permits and adopted. On December 18, 1991 the ALJ closed the record on this issue by directing the NYS DEC to immediately incorporate the Commission's proposed language into the permits.

A mid-year status conference with the ALJ set a negotiation schedule and tentative hearing date for October 1, 1991. That schedule was revised as the parties have continued to negotiate the remaining issues (untreated discharges and plant capacity) and will do so through the month of December. During October and November, negotiations on untreated discharges took place. Among the items that have yet to be resolved are the issues of compliance schedules for CSO abatement, a capacity assurance program, and plant flow.

March 1992 has been tentatively set for beginning adjudication of the nutrient removal issue, with a conference date with the ALJ of January 29, 1992.



YONKERS JOINT WASTEWATER TREATMENT PLANT PERMIT MODIFICATION HEARING

ISC petitioned for party status in a NYS DEC administrative hearing on the modification sought to increase the Yonkers Joint Wastewater Treatment Plant's permitted flow of 92 MGD to a flow of 120 MGD. The proposed modification would allow for a flow of 145 MGD during winter months. No construction to augment the plant, designed for a flow of 92 MGD, or operational changes were planned. A determination of the ALJ 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 3 (NYS DEC).

Although a hearing was convened in late 1989 and again in 1990, as a result of negotiations during January and February 1990, Westchester County DEF, the NYS DEC, and the Interstate Sanitation Commission agreed to settle the water quality issues. ISC withdrew its objection to the permit modification based upon its entering into a Stipulation of Settlement.

Among the issues settled, Westchester County DEF agreed to were (1) as a provision of the Yonkers SPDES permit, to implement a schedule of compliance to reduce excessive infiltration and inflow (I/I) in the entire sewer system in the Yonkers Sewer District, (2) to place a cap of 5 MGD of additions of all sewage from both new tie-ins to existing sewer lines and sewer line extensions, (3) that the proposed permit provision state that the flow will revert to 92 MGD six months prior to the permit expiration date, the increase in flow being temporary, and (4) that the permit limitations for mass loading for BOD and TSS be based on a 30-day average for a 92 MGD plant.

The NYS DEC, the Westchester County DEF and the ISC signed the stipulation settling the water quality issues and terminating ISC's participation in the hearing in late July 1990. The ALJ's report following the conclusion of the hearing was adopted by NYS DEC's Executive Deputy Commissioner (the NYS DEC Commissioner having recused himself after authorizing the removal of Yonker's sewer line extension ban in May 1990) in February 1991. The ALJ's report found that the water quality issues having been resolved to the satisfaction of the ISC, rendered the proposed flow increase in compliance with applicable law. The hearing is to reconvene when the final report on the relationship between increased flow and odor at the plant is submitted.

The ISC was added as a necessary party to an Article 78 Proceeding brought by the City of Yonkers (Matter of City of Yonkers v. Westchester County, NYS DEC, ISC, App. Div. 2d) to annul the negative declaration issued by Westchester County. The County had determined there would be no significant impact on the environment as a result of executing the Stipulation of Settlement. The Stipulation of Settlement commits the County to perform a SSES, to compel municipalities to fix their sewers, and to implement a program to eliminate excessive I/I. The City of Yonkers argued that a review under the State Environmental Quality Review Act (SEQRA) should have preceded the County's decision to cause environmental impacts related to construction activities necessary to fix sewers and the cost to the municipalities associated with the work.

The judge joined the ISC as a necessary party and ISC filed a verified answer in August 1991. In its papers the ISC clarified its reasons for opposing the re-rating and for entering the Stipulation of Settlement. The judge's August decision annulled the negative declaration, finding that the County was arbitrary and capricious in failing to consider alternatives to compelling the removal of I/I. NYS DEC and Westchester County appealed to the Appellate Division, imposing an automatic stay. The stay maintains the status quo following the Stipulation of Settlement pending a decision on the appeal. Thus the terms of the stipulation continue in full force and effect.



WASTEWATER TREATMENT PLANTS  
DISCHARGING INTO  
INTERSTATE SANITATION DISTRICT WATERS  
1 9 9 1

Plant	ISC Receiving Water Classification	Date of Const.	F l o w MGD		Type of Treatment	Estimated Population Served
			Average	Design		
<u>CONNECTICUT</u>						
<u>Fairfield County</u>						
Bridgeport - East Side	B-1	1973+	10.4	12.0	Secondary (AS)	45,000
- West Side	B-1	1973+	24.7	30.0	Secondary (AS)	113,000
Fairfield	A	1982+	6.8	9.0	Secondary (AS)	45,000
Greenwich	A	1982+	8.8	8.5	Secondary (AS)	54,000
Norwalk	B-1	1980+	13.4	15.0	Secondary (AS)	80,000
Stamford	B-1	1991+	16.0	20.0	Secondary (AS)	100,000
Stratford	A	1982+	8.1	11.5	Secondary (AS)	50,000
Westport	A	1975+	1.7	2.8	Secondary (AS)	13,500
<u>New Haven County</u>						
Milford - Beaver Brook	A	1987+	2.1	3.2	Secondary (AS)	16,000
- Housatonic	A	1987	5.9	8.0	Secondary (AS)	22,000
New Haven - East Shore	B-1	1989+	37.7	40.0	Secondary (AS)	215,000
West Haven	B-1	1988+	7.2	12.5	Secondary (AS)	55,000
<u>NEW JERSEY</u>						
<u>Bergen County</u>						
Edgewater	B-1	1989+	3.7	6.0	Secondary (AS)	21,000
<u>Essex County</u>						
Passaic Valley Sewerage Commissioners	B-1	1988+	296.0	330.0	Secondary (AS)	1,500,000
<u>Hudson County</u>						
Hoboken	B-1	1955	11.7	20.7	Primary	81,000
North Bergen M. U. A. - Woodcliff	B-1	1990+	2.3	2.65	Secondary (TF)	20,000
West New York	B-1	1982+	7.7	10.0	Primary	57,000
<u>Middlesex County</u>						
Middlesex County Utilities Authority	A	1978+	104.8	120.0	Secondary (AS)	890,000
<u>Monmouth County</u>						
Cliffwood Beach	A	1964	0.47	0.75	Secondary (AS)	3,400
River Gardens	A	1978+	0.09	0.10	Secondary (AS)	1,000
<u>Union County</u>						
Joint Meeting of Essex & Union Counties	B-2	1991+	69.2	75.0	Secondary (AS)	500,000
Linden Roselle Sewerage Authority	B-2	1989+	13.7	17.0	Secondary (AS)	59,000
Rahway Valley Sewerage Authority	B-2	1991+	30.6	35.0	Secondary (AS)	175,000
<u>NEW YORK</u>						
<u>Nassau County</u>						
Bay Park	A	1991+	55.0	70.0	Secondary (AS)	510,000
Belgrave Sewer District	A	1988+	1.4	2.0	Secondary (TF)	12,000
Cedar Creek	A	1989+	57.4	56.0	Secondary (AS)	460,000
Cedarhurst	A	1968+	0.81	1.0	Secondary (TF)	7,000
Cold Spring Harbor Laboratory*	A	1975	0.05	0.075	Physical/Chemical	350 - 500
Glen Cove	A	1981+	4.4	8.0	Secondary (AS)	28,000
Great Neck Sewer District	A	1990+	3.1	3.8	Secondary (TF)	13,000
Great Neck Village	A	1988+	0.88	1.5	Secondary (TF)	9,000
Inwood	A	1989+	0.88	2.5	Secondary (TF)	11,000
Jones Beach	A	1990+	0.08	2.5	Secondary (TF)	Seasonal
Lawrence	A	1966+	1.2	1.5	Secondary (TF)	6,000

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WASTEWATER TREATMENT PLANTS  
DISCHARGING INTO  
INTERSTATE SANITATION DISTRICT WATERS  
1 9 9 1

<u>Plant</u>	<u>ISC Receiving Water Classification</u>	<u>Date of Const.</u>	<u>F l o w</u>		<u>Type of Treatment</u>	<u>Estimated Population Served</u>
			<u>Average</u>	<u>Design</u>		
<u>NEW YORK (Continued)</u>						
<u>Nassau County (Continued)</u>						
Long Beach	A	1990+	5.8	7.5	Secondary (TF)	40,000
Oyster Bay Sewer District	A	1965+	1.5	1.2	Secondary (TF)	8,500
Port Washington Sewer District	A	1991+	3.0	4.0	Secondary (TF)	30,000
West Long Beach Sewer District	A	1986+	0.7	1.5	Secondary (TF)	5,000
<u>New York City</u>						
<u>Bronx County</u>						
Hunts Point	B-1	1977+	158.7	200.0	Secondary (AS)	562,000
<u>Kings County (Brooklyn)</u>						
Coney Island	A	1965+	101.9	100.0	Secondary (AS)	661,000
Newtown Creek	B-1	1967	326.2	310.0	Secondary (AS)	984,000
Owls Head	B-1	1991+	129.7	120.0	Secondary (AS)	782,000
Red Hook	B-1	1987	43.3	60.0	Secondary (AS)	232,000
26th Ward	A	1975+	63.3	85.0	Secondary (AS)	224,000
<u>New York County (Manhattan)</u>						
North River	B-1	1986	188.8	170.0	Secondary (AS)	546,000
Wards Island	B-1	1979+	264.8	250.0	Secondary (AS)	1,025,000
<u>Queens County</u>						
Bowery Bay	B-1	1978+	162.5	150.0	Secondary (AS)	441,000
Jamaica	A	1978+	84.7	100.0	Secondary (AS)	578,000
Rockaway	A	1978+	31.3	45.0	Secondary (AS)	101,000
Tallman Island	B-1	1979+	65.5	80.0	Secondary (AS)	470,000
<u>Richmond County (Staten Island)</u>						
Arthur Kill Correctional Facility*	B-2	1969	0.12	0.1	Secondary (AS)	1,000
IS-7*	A	1964	0.003	0.13	Extended Aeration w/ Sand Filtration	1,100
Mount Loretto Home - Plants #1 & #2*	A	1962	0.07	-	Septic Tank	1,000
Oakwood Beach	A	1979+	30.1	40.0	Secondary (AS)	172,000
Point East Condos*	A	1986	-	0.16	Extended Aeration w/ Sand Filtration	300
Port Richmond	B-2	1979+	42.3	60.0	Secondary (AS)	181,000
Princess Bay*	A	1987	0.048	0.16	Extended Aeration w/ Sand Filtration	480
PS-3*	A	1969	-	0.004	Extended Aeration	1,000
PS-42*	B-2	1967	0.004	0.021	Secondary (AS)	1,100
Saint Joseph's School*	A	1963	-	0.02	Septic Tank with Sand Filtration	1,200
Staten Island University Hospital, South*	A	1985+	0.032	0.04	Secondary (AS)	750
Treetop Village*	A	1985	0.25	0.25	Extended Aeration w/ Sand Filtration	-
Village Green*	B-2	1970	0.46	1.0	Extended Aeration	2,400
Woodbrook Village*	B-1	1980	0.27	0.7	Extended Aeration	2,700
<u>Rockland County</u>						
Joint Regional Sewerage Board-Town of Haverstraw	A	1980+	4.4	8.0	Secondary (AS)	50,000
Orange & Rockland Utilities*	A	1984+	0.003	0.012	Secondary (AS)	Industrial
Orangetown Sewer District	A	1985+	8.8	8.5	Secondary (TF)	50,000
Palisades Interstate Park Bear Mountain Plant	A	1967+	0.06	0.25	Secondary (TF)	Seasonal
Tallman Mountain Plant	A	1968	-	0.01	Secondary (AS)	Seasonal
Rockland County Sewer District #1	A	1989+	20.0	26.0	Secondary (RD)	160,000

WASTEWATER TREATMENT PLANTS  
DISCHARGING INTO  
INTERSTATE SANITATION DISTRICT WATERS  
1 9 9 1

Plant	ISC Receiving Water Classification	Date of Const.	Flow MGD		Type of Treatment	Estimated Population Served
			Average	Design		
<u>NEW YORK (Continued)</u>						
<u>Suffolk County</u>						
Stony Point	A	1985+	0.93	1.0	Secondary (AS)	10,000
Huntington Sewer District	A	1988+	1.6	2.5	Secondary (RD) (TF)	25,000
Northport	A	1973+	0.33	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+	25.0	30.0	Secondary (AS)	215,000
Suffolk County Sewer District #6	A	1973+	0.62	2.0	Secondary (AS)	10,000
Suffolk County Sewer District #21	A	1989	1.9	2.5	Secondary (BO)	20,000
<u>Westchester County</u>						
Blind Brook (Rye)	A	1985+	3.6	5.0	Secondary (AS)	25,500
Buchanan	A	1990+	0.19	0.50	Secondary (AS)	2,000
Kings Ferry Sewer Association*	A	1971	0.03	0.05	Secondary (AS)	600
Mamaroneck	A	1965+	17.4	18.0	Primary	80,000
Metro North (Harmon Shop)*	A	1985+	0.29	0.40	Physical/Chemical	500
New Rochelle	A	1982+	17.2	13.6	Secondary (AS)	80,000
Ossining	A	1981	4.3	7.0	Secondary (AS)	40,000
Peekskill	A	1980+	6.4	10.0	Secondary (AS)	35,000
Port Chester	B-1	1990+	4.3	6.0	Secondary (RD)	26,000
Springvale Apartments Company*	A	1991+	0.09	0.1	Secondary (RD)	1,000
Yonkers Joint Treatment	A	1988+	87.7	92.0	Secondary (AS)	500,000
<u>FEDERAL &amp; MILITARY</u>						
Camp Smith - (Westchester Co.)	A	1988+	0.04	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+	0.12	0.4	Secondary (TF)	2,000
Military Ocean Terminal (Hudson Co.)	B-1	1982+	0.12	0.18	Secondary (AS)	3,000

NOTES: Except for the ISC Receiving Water Classification, all information and data are supplied by the individual operating entities and are published as supplied.

+ Year of major additions or reconstruction

\* Private or institutional sewage treatment plant

(AS) Activated Sludge

(BO) Biochemical Oxidation

(RD) Rotating Disc

(TF) Trickling Filter



INTERSTATE SANITATION COMMISSION  
FINANCIAL STATEMENT FY 1991

The Commission's accounting records are maintained on a cash basis and are audited annually. The following is a statement of cash receipts and disbursements for fiscal year July 1, 1990 to June 30, 1991:

CASH BOOK BALANCE AS OF JUNE 30, 1990-----\$310,599.88

RECEIPTS

Connecticut - FY '91	\$ 3,333.00	
New York - FY '91	315,000.00	
New Jersey - FY '91	284,000.00	
EPA - FY '90	59,899.00	
EPA - FY '90 (to be used towards	12,601.00	
EPA - FY '91                   EPA - FY '91)	240,597.00	
Interest	19,203.79	
Miscellaneous Receipts	<u>20,655.49</u>	
TOTAL RECEIPTS		<u>955,289.28</u>
	Sub-Total	\$1,265,889.16

DISBURSEMENTS

TOTAL DISBURSEMENTS	<u>949,726.70</u>
CASH BOOK BALANCE ON June 30, 1991	\$316,162.46 =====

Checking Account	\$ 10,446.82
Insured Money Market Account	<u>305,715.64</u>
	\$316,162.46 =====

## 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
DEF	Department of Environmental Facilities
DEP	Department of Environmental Protection
DEPE	Department of Environmental Protection and Energy
EDF	Environmental Defense Fund
EPA	Environmental Protection Agency
HEP	Harbor Estuary Program
HRFA	Hudson River Fisherman's Association
HUCWSA	Hoboken-Union City-Weehawken Sewerage Authority
I/I	infiltration/inflow
ISC	Interstate Sanitation Commission
MGD	million gallons per day
MUA	Municipal Utilities Authority
NB	North Bergen
NEP	National Estuary Program
NJ	New Jersey
NPDES	National Pollutant Discharge Elimination System
NRDC	Natural Resources Defense Council
NYBRP	New York Bight Restoration Plan
NYC	New York City
NYS	New York State
O&M	Operation and Maintenance
R/V	research vessel
SEQRA	State Environmental Quality Review Act
SPDES	State Pollutant Discharge Elimination System
SSES	sewer system evaluation survey
STP	sewage treatment plant
SUNY	State University of New York
TSS	total suspended solids
WLA	wasteload allocation
WNY	West New York
WPCP	water pollution control plant