

# INTERSTATE SANITATION COMMISSION

*A TRI-STATE ENVIRONMENTAL AGENCY*



NEW YORK



NEW JERSEY



CONNECTICUT

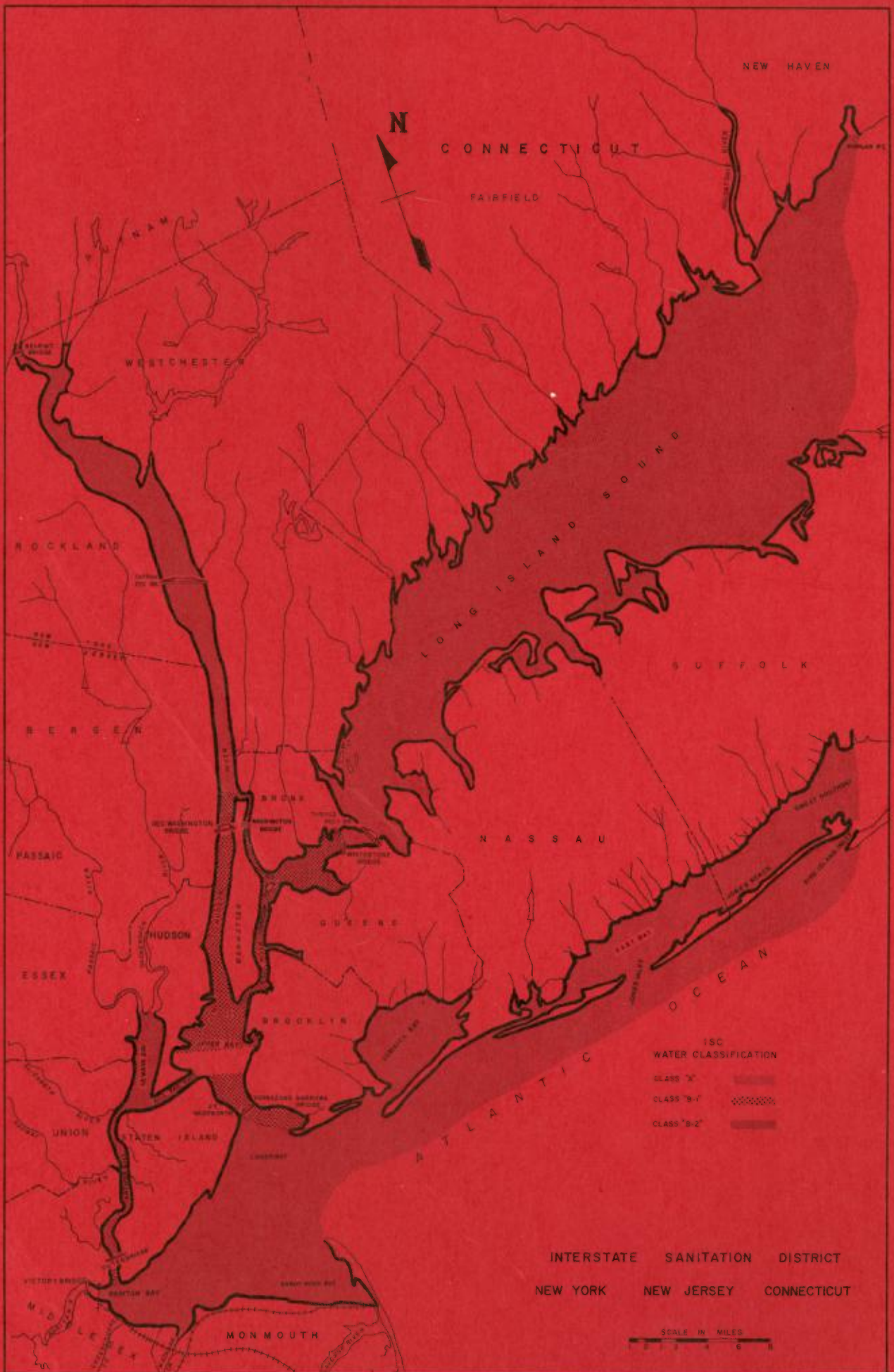
1992

ANNUAL REPORT

NEW YORK

NEW JERSEY

CONNECTICUT





# INTERSTATE SANITATION COMMISSION

*A TRI-STATE ENVIRONMENTAL AGENCY*



1992

REPORT

OF THE

INTERSTATE SANITATION COMMISSION

ON THE

WATER POLLUTION CONTROL ACTIVITIES

AND THE

INTERSTATE AIR POLLUTION PROGRAM

# INTERSTATE SANITATION COMMISSION

A TRI-STATE ENVIRONMENTAL AGENCY

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### NEW YORK

Donna B. Gerstle  
Thomas C. Jorling  
Orin Lehman

Acting Director -  
Acting Chief Engineer  
Howard Golub

January 22, 1993

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

Your Excellencies:

The Interstate Sanitation Commission respectfully submits its report for the year 1992.

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

Respectfully submitted,



For the State of New Jersey

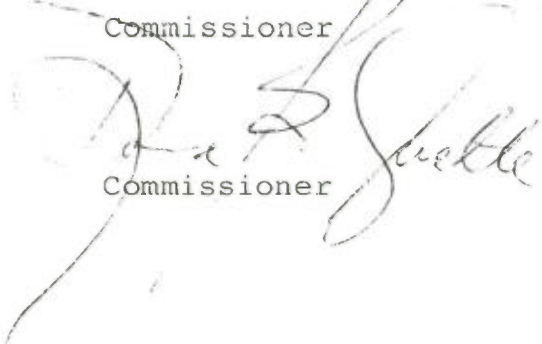
Acting Chairman

For the State of Connecticut



Commissioner

For the State of New York



Commissioner



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IN MEMORY OF

COMMISSIONER GEORGE DUMBACH



1932 - 1992

Mr. George Dumbach, founder and president of Pecinka-Dumbach Associates, served as an ISC citizen Commissioner from New York for 14 years. He served as Vice Chairman from March 1985 to February 1987; Treasurer since March 1987 and Acting Chairman from December 1991 until his passing.

As a tribute to Mr. Dumbach, the Commission adopted the following resolution on September 10, 1992:

THAT: THE INTERSTATE SANITATION COMMISSION SADLY NOTES THE PASSING OF COMMISSIONER GEORGE DUMBACH WHO SO UNSTINTINGLY GAVE OF HIS TIME AND ENERGIES THROUGHOUT HIS 14 YEARS OF SERVICE TO THE ISC. A TRUE ENVIRONMENTALIST, COMMISSIONER DUMBACH WOULD BROOK NO COMPROMISE WHERE THE ENVIRONMENT WAS CONCERNED AND WAS ALWAYS IN THE FOREFRONT TO INSURE THAT THE COMMISSION'S HIGH STANDARDS WERE MAINTAINED. HIS DEDICATION AND ENTHUSIASM REMAIN A PROUD LEGACY OF THIS COMMISSION.

COMMISSIONER LESTER H. GRUBMAN

Mr. Lester H. Grubman has been an ISC citizen Commissioner from New Jersey since 1984. A lifelong resident of New Jersey, active in community affairs, a World War II veteran, Mr. Grubman was Chairman of the Board and Chief Executive Officer of the Progressive Life Insurance Company.

To commemorate his service to the ISC, the Commission adopted the following resolution on September 10, 1992:

**THAT: THE INTERSTATE SANITATION COMMISSION PROUDLY PAYS TRIBUTE TO COMMISSIONER LESTER H. GRUBMAN WHOSE DEDICATED SERVICE AND SUPPORT AS AN ISC COMMISSIONER SINCE JUNE 1984 HAS LED TO IMPROVED ENVIRONMENTAL QUALITY IN THE TRI-STATE REGION.**



RETIREMENT OF DR. ALAN I. MYTELKA

DIRECTOR AND CHIEF ENGINEER/EXECUTIVE SECRETARY

On July 31, 1992, Dr. Alan I. Mytelka retired from the position of Director and Chief Engineer/Executive Secretary of the Commission. He joined the Commission on February 3, 1969 and became Director and Chief Engineer/Executive Secretary on April 1, 1983.

To commemorate his retirement, the Commission adopted the following resolution on September 10, 1992:

THAT: UPON HIS RETIREMENT AS DIRECTOR AND CHIEF ENGINEER/EXECUTIVE SECRETARY, THE INTERSTATE SANITATION COMMISSION PROUDLY HONORS ALAN I. MYTELKA, Ph.D., FOR 23½ YEARS OF DEDICATED SERVICE. HIS STEADFAST DETERMINATION IN GUIDING THE ISC'S ENVIRONMENTAL PROGRAMS HAS BENEFITTED MILLIONS OF PEOPLE IN THE TRI-STATE REGION BY IMPROVING THE ENVIRONMENT IN WHICH THEY LIVE.

STATEMENT OF THE CHAIRMAN  
OF THE  
INTERSTATE SANITATION COMMISSION

Ironically, and despite another round of budget cuts, this past year has proven an especially gratifying one for the Commission. Many of the issues that the ISC has fought for over the past few years -- often in the face of stern opposition -- are continuing to pay rich dividends on behalf of the environment throughout our tri-state District.

A recent feature in the New York Times heralded the return of small-scale shellfish gathering along some areas of the Long Island Sound as a result of improved water quality, citing locations such as Greenwich Point Park in Connecticut. We believe this is part of a pattern of steady improvement, following as it does on the heels of our previous Annual Reports which noted that the States of New York and New Jersey were able to lift the seasonal restrictions and open almost 30,000 acres of shellfish beds in our District for year-round harvesting. I believe that most of this progress stems back to the mid-1980s when the ISC led a bitter fight and adopted year-round disinfection requirements.

While we continue to make every dollar count in our sampling, testing and regulatory programs, I wanted to make special note of our enforcement actions. In this area I am pleased to report that the Commission's long-standing litigation on two cases affecting the water quality of the region are approaching successful conclusions -- these are the Hudson County, New Jersey and the Fresh Kills Landfill cases.

As we now stand in the litigation to ensure compliance with ISC's Regulations at several Hudson County, New Jersey sewage treatment plants, 1992 saw another milestone. Litigation against these sewage treatment plants has resulted in fines being assessed for violations and, most importantly, by early 1993, all of the plants will have been upgraded and operating as secondary treatment facilities. As a result of Consent Orders, West New York completed upgrading its plant and Hoboken is looking toward completion in the early part of next year.

In the suit regarding the operations at the Fresh Kills Landfill -- an issue spearheaded by the ISC in 1987 after languishing in the courts for years -- we have continued our work to expedite settlement, via a Consent Order, to achieve our goal of ensuring that debris does not escape from the landfill by requiring the New York City Department of Sanitation to build an enclosed barge unloading facility at the garbage transfer point. I am pleased to report that the Commission's insistence upon set-aside monies for the enclosed unloading facility has been met. A final resolution is in sight that, with the construction of the enclosed barge unloading facility, will guarantee protection of the waterways and the beaches along the New Jersey and Staten

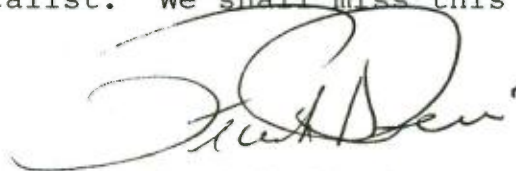


Island shorelines from debris from the Fresh Kills Landfill.

Currently, and a top priority among our enforcement activities, is the incorporation of ISC Regulations into the permits for the operation of New York City's 14 wastewater treatment plants. As the flow from these plants affects the entire tri-state region, the resolution of this issue is clearly a vital concern. Based on our latest communication with the Administrative Law Judge, we are optimistic that this incorporation is imminent.

On a personal note, I want to express to our former Executive Secretary/Director and Chief Engineer, Dr. Alan I. Mytelka, our best wishes on his retirement after almost a quarter of a century of dedicated service to this Commission. Although we will miss his expertise and enthusiasm, we feel encouraged by the fact that Howard Golub, our Assistant Director and Assistant Chief Engineer who has been with the Commission for over 25 years, has been named Acting Director and Acting Chief Engineer. A smooth transition has kept our full program of activities moving forward without interruption. It is my hope that our new leadership will also trigger a fresh start in our continuing efforts to work harmoniously and in synchronization with the environmental agencies of our three member states.

Finally, I know I speak for every member of the Commission in expressing my deep sorrow over the untimely death of Commissioner George Dumbach. He was always among the first to spring to the defense of the Commission whenever outside pressures threatened to compromise our environmental standards. He was my friend and a true environmentalist. We shall miss this dedicated and generous man.



Frank A. Pecci  
Acting Chairman  
Vice-Chairman, New Jersey

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## I. EXECUTIVE SUMMARY

In the mid-1930s, when interstate conflicts began to arise regarding pollution in the waters surrounding and shared by the States of New York, New Jersey and Connecticut, the Tri-State Treaty Commission recommended the establishment of a body to control and abate water pollution. Following their recommendation, the Tri-State Compact establishing the Interstate Sanitation District and the Interstate Sanitation Commission was enacted in 1936, with the Consent of Congress. The ISC initially consisted of 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.

As early as 1887, facilities were being put on-line to treat sanitary wastes. By the 1930s, within the Interstate Sanitation District, 542 million gallons per day (MGD) of sewage were receiving primary treatment, 2 MGD were receiving secondary treatment, and 1.066 billion gallons a day (BGD) of untreated sanitary and industrial wastes were flowing into the Region's waters. The ISC has been instrumental in getting wastewater treatment facilities built and upgraded to prevent pollution in the District's waters. By 1993, all facilities in the Interstate Sanitation District will be at secondary treatment levels treating more than 2.5 BGD. However, still to be addressed are the untreated discharges from combined sewer overflows (CSOs) and storm sewers, and approximately 0.6 to 2 MGD of raw sewage discharges.

Although more has to be done, measurable environmental improvements have been made in recent years. In the past several years, due to a great degree to ISC's year-round disinfection requirement which went into effect in 1986, thousands of acres of shellfish beds have been opened on a year-round basis; very few beach closings due to elevated levels of coliform bacteria or wash-ups of debris have occurred during the 1990, 1991 and 1992 bathing seasons; and the presence of many and varied finfish stocks have been available for commercial and recreational harvest.

Operations at the Commission have been severely curtailed since July 1989 as the result of that fiscal year's 35% budget cut. Each year since then, the ISC budget has been cut to the point where the present staff is approximately 50% of its size from that of fiscal year 1988-1989. Despite these reductions, the staff has performed to its utmost to fulfill the technical and administrative responsibilities. Most of the ambient and



effluent water quality sampling programs have been drastically reduced and, except for the Staten Island odor complaint answering service and limited investigations, the air pollution programs have been virtually eliminated.

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.

From the time of the earliest settlement, the area encompassed by the Interstate Sanitation District has been a living landscape. Many of the stresses of population and industrialization can be generally assessed in terms of use impairments which have measurable social and economic effects. What is of utmost concern is to ensure that as changes occur, they are not done at the expense of the environment. Parks, fisheries, recreation, residential and commercial/industrial complexes, as well as historic preservation, can be achieved and exist in harmony with the environment.

The Commission conducts an aggressive public involvement, education and outreach program. ISC regularly testifies at public hearings and meetings on various issues of concern throughout the region. For several years, ISC has given lectures at local colleges on subjects dealing with coastal pollution, oceanography, sampling and data collection, and related Commission activities. During the past three years, the Commission has been a sponsor for Our World Underwater Scholarship Society which gives young scholars the opportunity to get nationwide exposure to diverse organizations involved with the marine environment. The Commission also regularly interacts with a number of professional, civic, environmental, and citizens' organizations.

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 focus on providing assistance for the effective coordination of approaches to regional problems. ISC is continuing



to work toward its long-standing 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, pretreatment of industrial wastes, toxics contamination, participation in the National Estuary Program, land-based alternatives for sewage sludge disposal, ocean disposal of 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 is under way and will provide for the reduction of pollution from municipal and industrial wastewaters discharging into District waters. It is estimated that nearly \$6.1 billion has been allocated by municipalities in the District for this purpose.

During this past year, the Commission has been involved in several legal actions which are detailed in the Legal Activities section of this report and are highlighted as follows:

- party status in the New York State Department of Environmental Conservation adjudicatory hearing on the 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 Stipulation of Settlement for the Yonkers Joint Wastewater Treatment Plant, agreed to by the ISC, to protect water quality in the Hudson River.
- active involvement with Hudson County, New Jersey communities as to upgrading or eliminating their treatment plants 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.
- involvement in a New York State Department of Environmental Conservation enforcement proceeding against New York City's North River treatment plant on various issues of environmental concern.
- involvement with the Brooklyn Navy Yard Resource Recovery Facility adjudicatory hearing.

Opening presently closed waters for swimming continues to be a high ISC priority. The Commission is presently working on a project to address CSO, stormwater and nonpoint runoff problems related to opening areas in the District for swimming. ISC is evaluating various alternatives to determine the geographic area in which control from the various sources is necessary, and the coliform reductions required in order for the waters to meet swimming criteria.

Since completing its region-wide combined sewer overflow (CSO) report in 1988 and subsequently holding a regional CSO conference in 1989, the Commission is continuing to work towards its goal of insuring compatible CSO requirements on a regional basis.

This year, ISC's region-wide inventory of development projects within the District was again updated. Among other things, this inventory contains estimates of the amount of sewage that will be generated by proposed projects. This information is invaluable to the ISC in determining 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 and also participates on various work groups for these studies. The point is now being reached where plans are being developed and the choices and commitments must be made. A major effort will be made by the Commission to ensure that these programs are integrated and the problems prioritized.

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, for a second consecutive year, in a multi-agency intensive survey in Long Island Sound to document dissolved oxygen conditions.

Since 1981, the Commission has been involved with the US Army Corps of Engineers' Dredged Material Disposal Management Plan for the Port of New York and New Jersey. An ISC staff member has been serving as chairman of the Public Involvement Coordination Group since 1987. 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 contaminated dredge spoils but that disposal take place in new borrow pits specifically designed for that purpose.



Since 1988, ISC has been a participant on US EPA's technical review group that is advisory to EPA and provides input for that agency to use in its development of an environmental impact statement on the designation of an Alternate Mud Dump Site.

The ISC laboratory is certified by New York State and New Jersey and has continued to participate in the US EPA's Water Pollution Laboratory Evaluation Program and Water Supply Microbiology Performance Evaluation Study. The ISC laboratory also conforms with all recommended procedures of the US 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 and made available to the academic community, 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 this past year because of budgetary restrictions.

The Commission continued its role as coordinator of the High Air Pollution Alert and Warning System for 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 participated in the Ozone Health Message System to alert the public of unhealthy ambient air conditions. Based on information received from its member states, the Commission disseminated health messages to radio and television stations, as well as to government agencies in the Region.

During the 12 months from October 1991 through September 1992, the Commission received 144 air pollution complaints -- a decrease of 6.4% over the previous 12-month period. This year, all of the calls originated from Staten Island. It is extremely unfortunate that the ISC's Staten Island field office remains closed -- a situation that has existed since June 1989 when, due to budget cuts, the Commission was forced to lay off its entire air pollution field staff and close the Staten Island field office. The 24-hour-a-day answering service has been maintained and the Commission investigates as many complaints as its resources will allow. ISC also forwards complaints to the appropriate enforcement agencies.



## II. WATER POLLUTION

### GENERAL

During 1992, nearly \$6.1 billion was allocated for 208 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 \$266 million for 36 completed projects, nearly \$3.8 billion for 84 projects in progress, and over \$2 billion for 88 future projects. These expenditures are being used for engineering studies, CSO abatement projects, land-based alternatives for sewage sludge disposal, and 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.

Although significant improvements have been made in water pollution abatement these past years throughout the District due to the great expenditures for infrastructure, there is still 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. By early 1993, all primary sewage treatment plants in the District will have been upgraded to secondary treatment or diverted their flows to a regional plant for treatment. The elimination of combined sewer overflows (CSOs) or the amelioration of the effects of CSOs is under way. Several communities have already started to separate sanitary and storm sewers. Other structural alternatives have been initiated such as swirl concentrators and retention tanks. In several selected areas, New York City will be implementing booms to capture CSO discharges and use skimmer boats to collect the captured floatables. ISC has been advocating the use of increased street sweeping as a short-term interim floatables control measure until other short-term measures and long-term structural and/or nonstructural measures are in place and operational.

Another regional milestone was achieved on June 30, 1992. The final barge loaded with sewage sludge was taken to the 106-mile dump site in the Atlantic Ocean. Interim and long-term plans for the disposal and beneficial uses of sewage sludge were mandated by the Ocean Dumping Ban Act of 1989. However, another pollution source must now be addressed; that is, the centrate produced when sludge is dewatered must now be treated in order to reduce its pollutant loadings.

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 1992.

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.





## CONNECTICUT WATER POLLUTION CONTROL PLANTS

The Long Island Sound Study Policy Committee (consisting of the Regional Administrators of US EPA - Regions I and II, and the Commissioners of the state environmental departments in New York and Connecticut) has adopted a "no net increase" policy in regards to nitrogen loadings into Long Island Sound and the Upper East River. Modeling efforts, supported by ambient and effluent water quality monitoring data, have identified excess nitrogen as the major constituent contributing to hypoxic conditions (low dissolved oxygen concentrations). Refer to the National Estuary Program in this report for additional information.

The Commissioner of the Connecticut Department of Environmental Protection has negotiated Consent Orders with 13 municipal treatment facilities which discharge into Long Island Sound or major riverine drainage basins which impact the Sound for the implementation of the "no net increase" policy for nitrogen discharges. The Consent Orders require a facility evaluation for nitrogen reduction retrofit capabilities, nitrogen loading reduction projections and costs incurred to achieve the necessary modifications. Reports were due September 1, 1992, with an operational start-up anticipated by October 31, 1993.

This policy applies to all municipal treatment facilities from Clinton Harbor westerly to the New York State border. Of the 12 Connecticut facilities in the Interstate Sanitation District, seven have biological nutrient removal (BNR) Consent Orders: Milford (Beaver Brook and Housatonic), New Haven, Norwalk, Stamford, Stratford and Westport. Refer to the individual plant write-ups for additional information.

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

#### Project in Progress

Drainage basin improvements which are addressing a massive reduction of combined sewer overflows are well under way. The project will eliminate 40 CSOs which discharge into Black Rock and Bridgeport Harbors. The 19 remaining CSOs will be monitored by a remote telemetering system. An operational start-up date has been rescheduled for December 1994, 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 capabilities.

Nearly \$24 million is proposed to expand and rehabilitate the East Side plant; construction has again been rescheduled to begin July 1994. Besides the rehabilitation of the preliminary, primary, and secondary treatment units, rehabilitation will be done on electrical and mechanical equipment, as well as pumps and instrumentation. The East Side plant will eventually have a capacity of 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. A construction start-up date set is scheduled for March 1993.

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.

#### Fairfield, Connecticut (Fairfield County)

##### Completed Projects

Two engineering studies have been completed at a final cost of \$1.029 million. These investigations addressed biological nutrient removal and I/I reduction.

##### Future Projects

This facility is presently operating under a State Administrative Order to install BNR equipment and eliminate I/I. According to the Municipal Compliance Schedule, substantial construction is to be complete by 1999.

Approximately \$4 million will be needed in order to retrofit this facility with BNR capabilities. In regards to I/I reduction, costs are estimated at over \$6 million. Construction start-up dates have not been determined for either project.

#### Greenwich, Connecticut (Fairfield County)

##### Project in Progress

This facility is presently operating under a State Administrative Order to increase treatment capacity. Seventy percent of the work is complete for a capacity increase to 12.5 MGD and for rehabilitative work. BNR retrofit work is being done concurrent with the aforementioned construction. An operational start-up date has been set for April 1993. Costs have been re-estimated to be \$43 million.



Milford - Beaver Brook, Connecticut (New Haven County)

Future Project

An approximate construction start-up date has been set for May 1993 for retrofitting the aerators for nitrogen removal. The anticipated completion date is October 1993 and the estimated cost is over \$650,000.

Milford - Housatonic, Connecticut (New Haven County)

Complete Project

At a final cost of nearly \$7.2 million, major improvements and additions have been added to the collection system. A three-year program completed on May 19, 1992, included the addition of 5 new pumping stations and the installation of 9.06 miles of gravity sewer lines, as well as 0.66 miles of force main.

Project in Progress

At an estimated final cost of \$43,500, twenty-five percent of the final clarifier improvements have been completed.

Future Project

Starting in May 1993, this facility will perform retrofit work for nitrogen removal. The \$800,000 project is expected to be complete in October 1993.

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

Completed Projects

An interim BNR assessment was conducted at a cost of \$30,000. The report was prepared and is being reviewed by the Connecticut DEP.

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 have been shut down for modifications and upgrading



in order to comply with air quality compliance regulations.

Sewer separation construction has been ongoing since 1989 and will continue until the entire drainage basin eliminates combined sewers. An estimated completion date has been set for 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 concurrently being modified to provide nitrogen removal; the work is approximately 60% complete.

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

### Norwalk, Connecticut (Fairfield County)

#### Projects in Progress

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

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

#### Future Project

At an estimated cost of \$1 million, the secondary process will be retrofitted for biological nutrient removal. A construction start-up date has been set for 1993.

Although design plans are complete for an incinerator, off-site processing has proven to be cost effective. The construction agenda has been postponed indefinitely.

### Stamford, Connecticut (Fairfield County)

#### Completed Projects

An engineering study which addresses the reduction of nitrogen loadings to Long Island Sound was completed.

#### Projects in Progress

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

Two engineering studies are under way. Both to be completed by early 1993, the studies involve sludge processing and main pump controls.

#### Stratford, Connecticut (Fairfield County)

##### Completed Project

Construction rehabilitation was completed during July 1992. Units that went into operation were fine bubble aeration equipment, gravity thickeners, and an effluent aeration tank. Disinfection facilities were retrofitted with liquid sodium hypochlorite. Additionally, comminutors were replaced with automated bar racks. A final cost for all work was \$4.3 million.

##### 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.

#### West Haven, Connecticut (New Haven County)

##### Completed Projects

Several engineering studies were completed which address collection system renovations. The cost for all the studies was \$75,000.

##### Projects in Progress

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

A \$7 million upgrade is well under way. Work is commencing on the primary and secondary clarifiers, secondary sludge thickeners (ceramic diffusion system), and the installation of blowers. Additionally, the following installations are under way or complete: new equipment for the main station, an aerated grit chamber, generators, an ash handling facility (100% complete), a primary sludge pump system (100% complete), and a chlorine contact tank.

Collection system rehabilitative work, which began during May 1992, is addressing I/I, relief interceptors, and upgrading pump stations. I/I work has identified a major source of extraneous inflow as illegal basement sumps. Prioritizing the entire city has led to the need for design

work for storm sewer extensions and lateral hookups. Final costs are expected to reach \$14 million and work will be complete during 1997.

Westport, Connecticut (Fairfield County)

Projects in Progress

Collection system extensions and maintenance and rehabilitation work has been ongoing since 1985. Pump station rehabilitation, force main and interceptor repairs, as well as an average installation of nearly two miles of new gravity sewer lines per year are continuing agenda items.

This facility is presently operating under a State Infiltration/Inflow (I/I) Abatement Order. Presently, an I/I evaluation is under way with an anticipated August 1993 completion date.

Future Project

During the spring of 1993, nutrient removal modifications will commence as per the recommendations of the BNR assessment study (95% complete).



## 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 been set for the spring of 1993. An additional \$2.5 million will be needed to install force mains to convey all wastewater flows. This construction is scheduled to start during 1993 and be operational by February 1995.

This facility is operating under an amended State Administrative Consent Order (April 1992) to cease effluent discharges to Whale Creek and Raritan Bay and establish an Atlantic Ocean outfall.

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 Bayshore Regional Sewerage Authority's facility via the Cliffwood Beach collection system. Construction is to start in the spring of 1993 and will cost about \$150,000.

By February 1995, 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 an amended State Administrative Consent Order to cease discharge of treated effluents to Matawan Creek and establish an ocean outfall.

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

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

Projects in Progress

At a cost of \$1.8 million, construction is under way to convert this 1.0 MGD plant to a pump station. All flows will be treated at the Bayshore Regional Sewerage Authority. The project is anticipated to be operational by May 31, 1993.

In order to address collection system logistics, approximately \$1.5 million is slated for force main installations.

This facility is operating under an amended State Administrative Consent Order (April 1992) 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)

Projects in Progress

This facility is undergoing (7% complete) expansion and upgrading construction to a 16 MGD secondary activated sludge plant utilizing a fine bubble process. An estimate of \$30.47 million was made for all construction phases. It is planned to be in operation during 1995. The additional capacity will enable the Bayshore Regional facility to treat flows from Aberdeen Township.

Estimates of \$8 million have been made for new sludge dewatering facilities and an incineration upgrade. A 12-month construction schedule has been proposed with a start-up date of early 1994.

Refer to the Aberdeen Township write-ups for additional information.

Project in Progress

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 of the Interstate Sanitation District.

## Edgewater, New Jersey (Bergen County)

### Completed Projects

Several engineering studies are complete or nearly so, which are addressing combined sewer overflows (100%), design plans for pump station #2 rehabilitation (100%) and pump station #3 reconstruction (100%), and a sludge pelletizing facility (65%).

### Project in Progress

Pumping station #2 rehabilitation and equipment replacement will incur costs of about \$300,000. Work began during November 1992.

### Future Project

Pumping station #3 reconstruction and trunk sewer installation is estimated to cost about \$1 million. Construction start-up dates have not been determined.

Construction of a sludge pelletizing facility will begin in mid-1993. Using a heat processing system, 20% filter cake will be converted to 5% sludge pellets. An estimated cost of \$3 million has been assessed.

## Hoboken, New Jersey (Hudson County)

### Projects in Progress

The Commission, US 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 83% complete. The new facility will incorporate trickling filters and ultraviolet disinfection. An estimate of nearly \$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 in-



stallation of a new force main on 18th Street, a new CSO outfall to the Hudson River, 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)

Completed Projects

Approved by NJ DEPE on October 1, 1991, this facility was rerated to a flow capacity of 85 MGD.

A sludge dewatering facility was completed at a final cost of \$23 million.

Improvements to the chlorination and potassium permanganate feed systems were completed at a final cost of \$900,000.

Engineering studies were completed to address the rehabilitation of the primary settling/sludge degritting system, digesters and beneficial uses of sludge.

Future Project

A sludge drying pelletizer facility will be built with construction starting in 1994. The estimated \$15 million project will start-up operations in March 1997.

Linden Roselle Sewerage Authority, New Jersey (Union County)

Projects in Progress

The Authority is presently operating under a State Administrative Consent Order (July 1992) to investigate effluent toxicity. Engineering studies are under way to address this issue by exploring industrial pretreatment impacts.

In regards to federal and State Consent Decrees, the Authority is searching for an off-site vendor for a long-term sludge plan. The final alternative is scheduled to be implemented by April 1996.

Middlesex County Utilities Authority, New Jersey (Middlesex County)

Projects in Progress

Engineering studies are under way to address different aspects of the sludge handling process: thickener odor con-

JOINT MEETING OF ESSEX & UNION COUNTIES  
UNION COUNTY, NEW JERSEY



SLUDGE HANDLING FACILITIES



SODIUM HYPOCHLORITE BUILDING

trol (50% complete), oxygenation tank upgrade (25% complete), and sludge pelletization (25% complete). Estimated construction start-up dates have been set for 1994.

At a cost of \$8 million, a curing bunker/odor control system is 95% complete.

#### Future Project

At an estimated cost of \$15 million, plant expansion work will include the addition of four final settling tanks with associated piping and pumping equipment. Construction start-up is planned for 1993.

### Middletown, Township of, Sewerage Authority, New Jersey (Monmouth County)

#### Project in Progress

Expansion work on the compost facility is 80% complete. The \$1.025 million project involves the installation of 12 additional temperature control stations (22 total) and computerizing the control blowers.

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

#### Future Project

An interceptor sewer is currently under design for the waterfront area between North Bergen and Edgewater. Work on the estimated \$4.5 million collection system expansion is anticipated to start during November 1993.

### Passaic Valley Sewerage Commissioners, New Jersey (Essex County)

#### Future Project

This facility is operating under a federal Order (ODBA) to implement interim and long-term sludge disposal alternatives. To this end, a sludge incinerator with a capacity of 560 dry tons per day is proposed to be on line by April 1997 at a final estimated cost of \$350 million.

### Rahway Valley Sewerage Authority, New Jersey (Union County)

#### Projects in Progress

Several engineering studies are nearly complete 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)

Completed Project

During December 1991, a 10 MGD secondary plant utilizing trickling filters went on line. The \$41 million project includes mechanical bar screens, grit removal, roto-strainers, belt filter presses, and a sludge storage tank.

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

Projects in Progress

Several engineering studies are under way: combined sewer overflow control (50% complete - \$60,000), effluent dilution (75% complete - \$45,000) and long-term sludge management (90% complete - \$60,000).

## 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 New York City DEP's Oakwood Beach WPCP; operational dates and final costs are indefinite.

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 has been engaged in a phased construction program for several years to enhance treatment system capabilities and to modify and improve aspects of the facility that have exceeded their useful life.

At a final cost of over \$46.3 million, four dual-fuel engine generators and ancillary equipment were installed. The power generation facilities also include a new diesel shop, a motor control center, and associated yard piping.

Improvements to the effluent pumping facilities were completed at a final cost of over \$8 million. The renovation included new pumps, the installation of a fourth pump, and associated new controls and supporting equipment.

Renovations to the sludge thickening facilities were completed at a final cost of over \$11.2 million. The work included the replacement of tank equipment, ancillary systems, and the installation of an improved odor control system.

In order to comply with a federally mandated Order (ODBA), sludge dewatering facilities were constructed at a cost of over \$32.1 million.

#### Projects in Progress

A Consent Decree and Enforcement Action was signed by the US EPA, NYS DEC and Nassau County in July 1989. The provisions include the cessation of sewage sludge disposal in the Atlantic Ocean by December 31, 1991 the requirement

for the development and implementation of both short-term and long-term alternatives for sewage sludge disposal.

Ongoing construction phases are addressing improvements to the raw sewage pumping facilities and primary treatment equipment, as well as the removal of the original plant power generation equipment and asbestos materials. An estimated cost of over \$42.5 million will be incurred.

Currently in the design phase are plans for additions and modifications to the central heating facilities, main building, sludge digestion facilities, central warehouse facilities, odor control system, and a sludge pelletization unit. Cost for this work, excluding pelletization, are estimated at over \$63 million.

Belgrave Water Pollution Control District, New York (Nassau County)

Future Project

An estimate of \$2 million has been made in order to add a trickling filter and a multimedia filter. Construction is planned to begin during June 1993.

Blind Brook, New York (Westchester County)

Future Project

Funded by an US EPA Action Plan Demonstration Project grant, a BNR retrofit was recommended by the Long Island Sound Study.

Bowery Bay, New York (Queens County)

Completed Project

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

Projects in Progress

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

City-wide, eight pump stations are undergoing reconstruction at a cost of \$11.432 million. Refer to specific NYC drainage basins for additional information.

Ongoing improvements to the existing facility at a cost



of \$11.758 million include installations and/or reconstruction of various units including pumps, digester roofs, polymer system, and secondary screens.

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

This facility and the 13 other New York City municipal wastewater treatment plants are the subject of an ongoing hearing before a NYS DEC Administrative Law Judge. Refer to the Legal Activities section of this report for detailed information.

A City-wide CSO abatement program is well under way. The objective is to eliminate or ameliorate the effects of untreated sewage which is bypassed during storm events. The first phase identified the extent to which CSOs result in contravention of water quality standards. The second phase consists of facility plans which involve 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, and the achievement of State standards for dissolved oxygen and coliform bacteria densities. These programs are being conducted in accordance with SPDES permit and/or Consent Order requirements.

A total of \$1.5 billion has been committed by New York City for a 10-year program (currently in its fifth year). Both structural and nonstructural solutions to the problem are being evaluated and prioritized. In 1993, NYC DEP is scheduled to boom several selected tributaries and use skimmer boats to collect the captured floatables.

### Future Projects

An engineering study, which is to start in 1993, will address energy conservation measures and instrumentation replacements.

Approximately \$6.219 million has been slated for fiscal year 1994 to design solutions to recommended alternatives of the stabilization study.

Collection system installations, reconstruction, and replacements of various structures (sluice gate operators, tide gates, valves) are scheduled for fiscal year 1993 with costs of over \$800,000.

Improvements to the existing facility involving various treatment units have fiscal years 1993 and 1994 finances in

place; these monies amount to \$5.954 million and \$1 million, respectively.

City-wide, twenty pump stations are slated for reconstruction and electrical installations during 1994 with costs amounting to over \$75 million.

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

Project in Progress

Capacity expansion construction is ongoing. This facility was rerated to a flow of 56 MGD utilizing a secondary activated sludge process. Presently, 20% of an estimated \$10 million phased construction agenda is complete. Aspects of this project include new final screens, a fire protection loop, and a laboratory expansion.

Future Project

Expenditures of over \$90 million are planned for the final construction phases which will increase capacity from 56 MGD to 72 MGD. Agenda items include a pelletizing facility, primary settling tanks, plant blowers, and retrofitting the aeration system. Start-up operations are expected to be under way by late 1994.

Cold Spring Harbor Laboratory, New York (Nassau County)

Future Project

An approximate construction date has been set for March 1993 at which time this facility will be converted to a pump station at a cost of about \$1.6 million. All flows will be diverted to the Cedar Creek Water Pollution Control Plant for treatment.

Refer to the Cedar Creek write-up for additional information.

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, 82.6% 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, and final settling and

sludge thickening tanks are included in this nearly \$669.5 million project. This facility is expected to be complete by 1997.

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

#### Future Projects

Collection system renovations (tide gate replacements) that are proposed for fiscal year 1993 will cost \$735,000.

Estimated to cost nearly \$38.9 million, a plant support facility, a conglomeration of workshops, is slated for 1994.

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

##### Completed Project

A control building renovation was completed at a final cost of \$240,000.

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

##### Project in Progress

A \$1.5 million rehabilitation is under way. The construction status of this project was unavailable.

##### 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)

##### Completed Project

This facility, after implementing innovative in-house engineering practices, has met all requirements of a State Consent Order to correct violations of SPDES effluent limitations. The Order was lifted on February 21, 1991, by NYS DEC - Region 1.

#### Huntington Sewer District, New York (Suffolk County)

##### Completed Projects

An engineering study is still under internal review in



regards to selecting alternatives for sludge disposal.

A \$450,000 renovation of various units was completed; it involved the replacement of piping and hydraulics.

#### Hunts Point, New York (Bronx County)

##### Completed Project

A plant stabilization study (\$280,000) which began during 1991 was completed.

##### Projects in Progress

Reconstruction of various phases of the existing treatment facility is costing \$4.784 million.

The construction of a sludge dewatering facility (design complete - \$14.9 million) is well under way. The cost estimate for this facility is \$148.7 million.

Retrofits are being considered for BNR. Funding applications are being submitted under the Innovative and Alternative Program of the State Revolving Loan Program.

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

##### Future Projects

Collection system renovations slated for 1993 include tide gate replacements and installations (\$550,000) and the construction of two pump stations (\$9.3 million).

Engineering studies to commence during 1993 will address I/I at a cost of \$986,000 and an energy conservation and instrumentation assessment.

Improvements to the existing plant including installations and reconstruction of various treatment units are slated for fiscal year 1993 (\$5.272 million) and 1994 (\$3.817 million).

As recommended by the Long Island Sound Study, process modifications are proposed for BNR. In addition, a proposed pilot project will address treatment of the centrate produced by sludge dewatering.

Inwood, New York (Nassau County)

Future Project

Proposed improvements have now been limited to repairs to the secondary anaerobic digesters. Start-up dates have not yet been determined. The estimated cost for this work is over \$1 million.

Jamaica, New York (Queens County)

Completed Projects

Sludge dewatering facilities are on-line (95% complete) with an anticipated cost of almost \$41 million.

Projects in Progress

Estimated at over \$51 million, new primary tanks and associated support equipment are being constructed. Information on the percent completeness was not available.

Future Projects

Several installations and reconstruction of various treatment units are slated for 1993 at costs of over \$3.6 million.

Engineering studies to commence during 1993 include an energy conservation and instrument replacement assessment, an SSES (\$2.279 million) and design work, which is Consent Decree related, for selected alternatives of a stabilization study.

Collection system renovations are scheduled to include two new pump stations (\$9.6 million) and tide gate replacements (\$100,000). Construction will commence during 1994.

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

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

Future Project

Planned to begin during January 1993, renovations to the digester will include a new floating cover, heating elements, valves, a gas line, a recirculation pump, and a temperature recorder. Cost estimates were not available.

Kings Ferry Sewer Association, New York (Westchester County)

Completed Project

At a final cost of \$240,000, two 25,000 gallon tanks have been added to this activated sludge facility. The tanks can be used for primary settling or secondary clarifiers. There was no capacity expansion; existing buildings and sewage works are in use. A chlorine contact tank has also been added.

Lawrence, New York (Nassau County)

Project in Progress

Conversion to a liquid hypochlorite system is 85% complete. The \$400,000 project includes a new building and an extension of the contact tank.

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

Project in Progress

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

Future Projects

An estimate of \$6 million has been made to upgrade three lift stations. In addition, a boiler for gas digestion, a gas mixer, and a dewatering unit will be added.

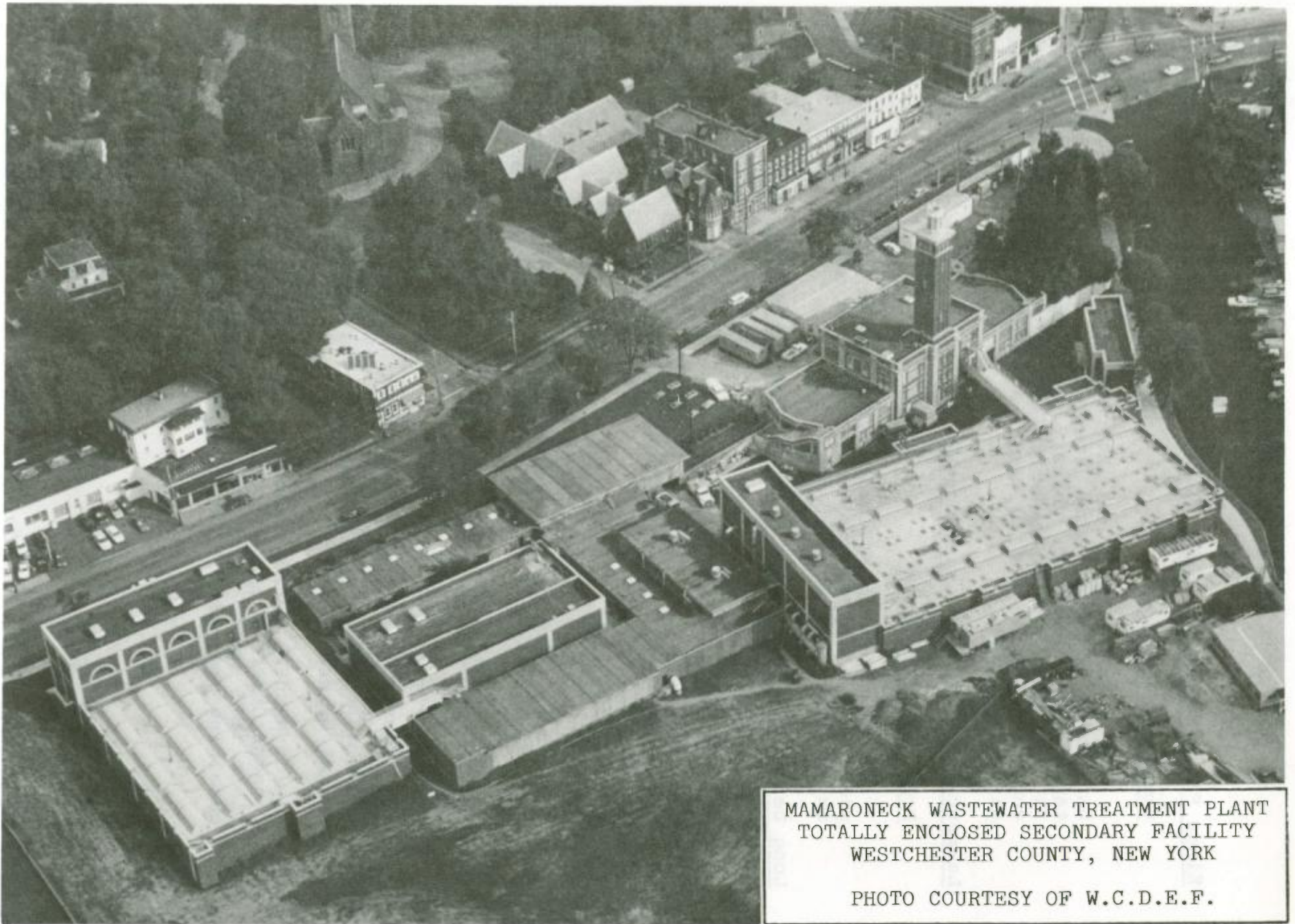
Mamaroneck, New York (Westchester County)

Projects in Progress

Construction upgrading and expansion to a 20.6 MGD secondary activated sludge plant is 98% complete. This project, with a cost of \$105 million, is expected to be operational by March 1993.

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





MAMARONECK WASTEWATER TREATMENT PLANT  
TOTALLY ENCLOSED SECONDARY FACILITY  
WESTCHESTER COUNTY, NEW YORK

PHOTO COURTESY OF W.C.D.E.F.

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

Completed Projects

At a final cost of \$7.2 million, a 5,000 gallon per minute stormwater pump station went on-line during December 1991. This installation, in conjunction with the separation of roof drains from the sanitary flow, has drastically reduced influent volumes at this secondary facility.

Projects in Progress

This facility is operating under a State Consent Order (modified November 12, 1991). A treatment plant evaluation was conducted in order to determine the plant modifications necessary to meet secondary effluent limitations. The Order specifies compliance with final BOD limitations by September 1, 1992.

At an estimated final cost of \$400,000, 55% of a plant upgrade is complete. Equipment is being added to modify biological treatment using an aerated mixed-media process.

Future Projects

Beginning in early 1993, several upgrading projects will involve sanitary sewer relining, a new oil-water separation system, and a railroad car wash recycle system which will reduce surfactant and metal content of the wastewater.

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 plans are imminent to hook up to the New York City sewer system in the Oakwood Beach drainage basin. However, final dates have not been established.

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 nearly complete. Further testing and evaluations were conducted during the 1992 spring and summer seasons when typically high flow conditions are prevalent. This work was estimated to cost \$500,000.

#### Future Project

Estimated to cost \$4 million, plans are set to begin sludge dewatering and pumping improvements during January 1993.

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)

##### Projects in Progress

Upgrading and expansion construction to incorporate a secondary treatment system utilizing step aeration with a reduced contact time has been postponed indefinitely. A schedule is currently being negotiated with NYS DEC - Region 2. However, design work and facility planning commenced at a cost of nearly \$4.6 million.

Plant modifications are under way which address reconstruction and installations with allocated funds of \$3.698 million (FY '92), \$2.48 million (FY '93), and \$175,000 (FY '94).

Ongoing reconstruction at the Manhattan pumping station as well as installations (electric, HVAC, plumbing, etc.) and associated force main replacements have costs of \$15.547 million. The Taaffe Place pump station is under construction (\$5.387 million).

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

##### Future Projects

During 1991, a total of 16 tide gates were to be replaced at a total cost of \$1.779 million in addition to



automatic sluice gate operators at a cost of \$1.248 million. However, all renovations have been postponed until fiscal years 1993 and 1994.

The Manhattan pump station has a continuing agenda into 1994 with estimated costs of \$42.36 million.

Recommendations of the stabilization study will be implemented during fiscal year 1994 at costs of nearly \$36 million.

#### Northport, New York (Suffolk County)

##### Completed Project

An I/I study was recently completed.

##### Projects in Progress

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

#### North River, New York (New York County)

##### Projects in Progress

This facility is operating under a State Consent Order (July 1, 1992) to address issues of capacity, odor, and air emissions. Refer to the Legal Activities section of this report for additional information.

Located on the rooftop of the North River WPCP, the 28 acre Riverbank State Park is scheduled to open on May 27, 1993. Approximately 90% of the landscaping is complete and punch list items are being addressed. Occupancy of several buildings is under way. Final costs for all structures and plantings have amounted to \$128 million.

Plant modifications under way to address odor control problems have funds allocated in the amounts of \$19.5 million (FY '92) and \$48.618 million (FY '93). Reconstruction of the primary and final tanks are costing \$2.876 million (FY '92) with additional expenditures slated for fiscal 1994 (\$960,000).

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

## Future Projects

Proposed collection system renovations during fiscal years 1993 and 1994 include tide gate replacements and installation of automatic sluice gate operators at estimated costs of \$3.097 million.

Design work for an odor control facility will begin during 1993 at a cost of \$8.646 million.

## Oakwood Beach, New York (Richmond County)

### Projects in Progress

Sludge dewatering facilities went on-line during June 1992. However, the work is only 70% complete and is estimated to cost over \$59 million.

Construction of the West Branch Interceptor System is well under way and is expected to be on-line by mid-1993. Costs are estimated to be \$80 million. The Richmond Avenue pumping station is under construction. The Hylan Boulevard Interceptor System is presently being installed.

NYS DEC has entered into an informal agreement 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.

### Future Project

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

Various improvements and replacements (gratings, emergency battery system, screens) are slated for 1993 at a cost of over \$2.9 million.

Engineering studies planned for 1994 include an energy conservation and instrumentation assessment, a stabilization study (\$518,000), and an SSES (\$2.608 million).

Orangetown Sewer District, New York (Rockland County)

Projects in Progress

A Sewer System Evaluation Survey, which is 90% complete and will cost \$967,000, is expected to be complete by early 1993.

Future Projects

This facility is operating under a State Consent Order to complete the aforementioned survey, to institute a short-term plan to improve the existing trickling filters, and to upgrade and expand its capacity to 12.75 MGD. Construction is expected to begin in 1993 and last for two years. The cost will range from \$8 to \$10 million in order to add extra units of treatment to all stages of the existing plant.

Ossining, New York (Westchester County)

Completed Projects

A \$280,000 rehabilitation project is nearly (95%) complete. The work, mandated by the US EPA, involves the installation of new bar screens and the refurbishing/enhancement of the multiple hearth furnaces' instrumentation.

Owls Head, New York (Kings County)

Projects in Progress

Over \$216 million is the re-estimated cost to complete construction upgrading. Overall, 95% of the work is complete and includes digester facilities, engine generator, pump and powerhouse, an outfall to Upper New York Bay, disinfection facilities, waterfront facilities for the sludge barge berthing area, and primary facilities.

Collection system renovations that began during 1991, including tide gate replacements (\$550,000) and pump station upgrading (\$750,000), are nearly complete.

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

Future Projects

Anticipated to be operational during May 1995, aeration tanks, final settling tanks, landscaping and computer controls will accrue costs of \$426 million.



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 by August 1, 1992.

At a final cost of \$4.2 million this facility has completed upgrading and plant capacity expansion to 1.8 MGD. The two year construction project involved new effluent and influent pump stations, chlorine contact tanks, primary and secondary clarifier tanks, and rotating biological discs.

Peekskill, New York (Westchester County)

Completed Project

The final cost for a new computer datalogger and control system is \$45,000. The system went on-line this past summer and monitors over 210 alarms and analog inputs that affect the plant and remote pump stations.

Project in Progress

Estimated to cost \$66,000, variable frequency pump drives and an intercom/paging system is being installed.

Port Richmond, New York (Richmond County)

Project in Progress

I/I work is ongoing with allocated funds of \$1.28 million.

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

Future Projects

Engineering studies are scheduled for 1994, including an energy conservation and instrumentation assessment and an SSES (\$2.313 million).

Modifications and improvements to the existing plant are slated for FY '93 (\$5.812 million) and FY '94 (\$1.171 million) which include the replacement of degritter pumps and reconstruction of primary tanks. Tide gate reconstruction has been rescheduled for 1993 (five tide gates at a cost of \$303,000).

Red Hook, New York (Kings County)

Projects in Progress

Sludge dewatering facilities are under way and are estimated to cost of over \$10 million.

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

Future Projects

Plant modifications and additions scheduled for FY '93 will address electrical, HVAC, and plumbing at costs of \$14.875 million.

Collection system renovations that are planned for 1993 include tide gate replacements (seven tide gates at a cost of \$281,000) and pump station upgrades (\$170,000). The Gowanus force main and flushing tunnel, as well as necessary dredging, will cost about \$4.816 million; scheduling has not yet been done.

As proposed by the Long Island Sound Study, a 1995 construction start-up is anticipated for BNR process modifications. Funding applications are being submitted under the Innovative and Alternative Program of the State Revolving Loan Program.

Rockaway, New York (Queens County)

Completed Project

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

Projects in Progress

Plant modifications to various treatment units are under way at a cost of \$2.321 million.

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

Future Projects

Plant modifications and improvements are planned for FY '93 (reconstruction - \$2.323 million) and FY '94 (pump replacements - \$608,000).

At a cost of \$1.98 million, an SSES will get under way

during 1993. A stabilization study costing \$518,000 will begin during 1994.

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

Project in Progress

Design work has been completed and construction has started for the installation of additional piping to provide sufficient capacity during peak wet weather flow conditions. The \$5 million project is scheduled to be in operation during 1994.

Staten Island University Hospital, New York (Richmond County)

Future Project

It is planned that this facility divert flows to the New York City DEP's Oakwood Beach plant for treatment via the Hylan Boulevard Interceptor. Dates and costs have not yet been finalized. Refer to the Oakwood Beach write-up for additional information.

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

Completed Project

Rehabilitation of the collection system is 100% complete. The final costs accrued were \$500,000.

Projects in Progress

This facility is operating under a State Consent Order (June 1990) to ensure secondary effluent limitations, complete the collection system renovations, and conduct a wasteload allocation study in Port Jefferson Harbor. The County is presently awaiting completion of the Long Island Sound Study so that final discussions with NYS DEC - Region 1 can address the Order.

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

Completed Project

A final Environmental Impact Statement (EIS) was completed and submitted to NYS DEC - Region 1. The study addresses the proposed construction of a 1.2 MGD pump station and associated force main to convey all wastewater from Pilgrim State Psychiatric Center to Bergen Point.



### Projects in Progress

This facility is operating under a modified State Consent Order (1987) to implement improvements and meet secondary effluent limitations.

Design plans are nearly complete (\$275,000) for the installation of two additional clarifiers. A facilities plan is also nearing completion (\$20,000) for sludge disposal options.

Phased construction renovations are nearly complete throughout the plant. An estimate of \$4.7 million was made for the work which began in January 1990. A major portion of this project deals with the stabilization of the outfall pipe to the Atlantic Ocean. The planned completion date is March 1993.

### Future Project

Estimated at \$4 million, an 18-month agenda has been set for the installation of two final clarifiers with a planned operational date of July 1994. This construction is part of the overall plans as noted in the aforementioned EIS.

### 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. However, construction has been postponed pending recommendations of the Long Island Sound Study.

### 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 (June 1990) to assure continued compliance and conduct a wasteload allocation study in Port Jefferson Harbor. The County is awaiting completion of the Long Island Sound Study so that final discussions with NYS DEC - Region 1 can address the Order.

## Tallman Island, New York (Queens County)

### Completed Projects

During 1992, sludge dewatering facilities went on-line at an estimated final cost of \$27.7 million.

### Project in Progress

A voluntary BNR pilot project is under way. Process modifications are planned in order to remove 30% to 50% of the nitrogen load by 1994.

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

### Future Projects

Pump station construction (\$5 million), installation of sluice gates (two sluice gates at a cost of \$60,000) and force main (\$3.5 million) are slated for 1993.

Plant modifications planned for FY '94 will include several installations and primary screen reconstruction; total costs will amount to \$1.638 million.

Engineering studies planned to begin during 1994 will address energy conservation and instrumentation assessment and stabilization (\$518,000).

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

### Projects in Progress

Construction is continuing on sludge dewatering facilities which have estimated costs of nearly \$202 million.

Collection system renovations include tide gate replacement (\$100,000) and installation of automatic sluice gate operators (\$500,000). However, this work is postponed indefinitely.

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

### Future Project

Reconstruction of new aeration and final settling tanks are scheduled for 1993 at a cost of \$4.958 million.

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

### Projects in Progress

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

Construction is continuing on a \$148.6 million sludge dewatering facility.

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

### Future Projects

Collection system renovations during 1993 will include 20 tide gate replacements (\$1.538 million). Seven additional tide gate replacements are scheduled for FY '94 (\$1.869 million).

A plant upgrading and expansion to a capacity of 309 MGD has been postponed; costs are estimated at \$600 million.

Improvements and modifications to the existing treatment units are planned for 1993 (\$2.37 million). Planned during 1994 are additional modifications (\$1.242 million), the installation of an emergency backup generator (\$7.888 million), and reconstruction of various units (\$1.612 million).

An engineering study to assess energy conservation measures and instrumentation upgrades is scheduled for 1993.

## Yonkers, New York (Westchester County)

### Projects in Progress

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

In order to identify and alleviate extraneous flows, a Sewer System Evaluation Survey (50% complete) is being conducted in several of the individual municipalities comprising the Yonkers service area. Completion, at a cost of \$15 million, is expected by May 1994. This SSES is being conducted as part of the Stipulation of Settlement signed by ISC, NYS DEC and Westchester County in settlement of the water quality issues raised in the aforementioned adjudicatory hearing.



Phases 1 and 2 of a combined sewer overflow and regulator rehabilitation project were completed during 1990 and 1991, respectively. The final phase is 50% complete. The work involves three pump stations which are expected to be finished by April 1993.

This facility is operating under a federal Consent Order to stop ocean dumping of sewage sludge by December 31, 1991 (ODBA). The last barge of sewage sludge was towed to sea on December 27, 1991.

As part of the Interim Decision issued by the NYS DEC Administrative Law Judge in the aforementioned adjudicatory hearing, an odor study (65% complete) is being conducted. An interim odor report has been submitted; the final report is contingent on increased flows to the plant.

#### Future Projects

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

Coarse air diffusers will be replaced by fine air diffusers at an estimated cost of \$3.5 million.

## EFFLUENT AND AMBIENT WATER QUALITY MONITORING

During this past year, the Commission's monitoring programs of the District's effluents and ambient waters was maintained, but continued at a considerably reduced level due to budget constraints and a reduced staff. The Commission laboratory is equipped to conduct a full range of tests, and ISC's laboratory personnel performed analyses for a wide range of parameters for the samplings and inspections conducted by field personnel at industrial, municipal and private wastewater treatment facilities, as well as for samples from an intensive survey in Long Island Sound.

For the second year in a row, the Commission's research vessel, the R/V Natale Colosi, was used for monitoring in Long Island Sound in support of the Long Island Sound Estuary Study. The sampling was performed to document hypoxic (low dissolved oxygen) conditions and was conducted from the beginning of 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's laboratory is certified by New York State and New Jersey and continues to participate in the US 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. The ISC laboratory also conforms with all recommended procedures of the US Food and Drug Administration's National Shellfish Sanitation Program.

Investigations of private and municipal facilities involve a six-hour period of sampling and an inspection of processes, equipment, and plant records; those of industrial facilities generally involve a 24-hour period or a full day's production, if less than 24 hours. Analyses of the parameters specified in the facilities' discharge permits are performed 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 N/SPDES discharge permit.

## SPECIAL INTENSIVE SURVEY

### 1992 Ambient Water Quality Monitoring in Long Island Sound to Document Dissolved Oxygen Conditions

In order to address a continuing need for weekly ambient water quality data in Long Island Sound, the US EPA - Region II requested that the Commission conduct an ambient intensive water quality sampling survey in support of the Long Island Sound Estuary Study. To that end, the ISC participated in a cooperative sampling effort with other governmental agencies during the summer 1992. The ISC conducted a similar survey in Long Island Sound during the summer of 1991.

Using the ISC research vessel the R/V Natale Colosi, four parameters -- temperature, salinity, dissolved oxygen and chlorophyll a -- were sampled at 18 stations weekly during the 1992 summer season. The sampling logistics were determined at a meeting of the Long Island Sound Study Monitoring Work Group of which ISC is a member. During that meeting, the spatial and temporal coverage of the sampling area was coordinated among the study participants. The other agencies taking part in the sampling were CT DEP, NYC DEP, Nassau County Department of Health and Westchester County Department of Health.

The data collected by ISC helped to fill in existing monitoring gaps and provided a consistent weekly data base for the western portion of Long Island Sound.

All sampling, sample preservation and analyses were done according to procedures accepted by the US EPA. Top (one meter below the surface), mid-depth and bottom (one meter above the bottom) samples for temperature, salinity and dissolved oxygen were taken at all stations on all sampling runs. For stations greater than 15 meters deep, two additional samples were taken -- one spaced equidistantly between the top and mid-depth samples and one spaced equidistantly between the bottom and mid-depth samples -- for a total of five samples per station. Top samples for chlorophyll a were taken at all stations on every other run.

A map and listing of the station locations and descriptions are on the following pages. A total of eleven weekly sampling runs were conducted from the beginning of July 1992 through mid-September 1992. Temperature, salinity and dissolved oxygen were determined in situ using portable instrumentation. Samples for chlorophyll a were collected from one meter below the surface and were properly stored and preserved for analysis at the ISC laboratory. The results of all analyses were summarized and were forwarded weekly to US EPA - Region II and to the NYS DEC, Division of Marine Resources.



INTERSTATE SANITATION COMMISSION

1992 LONG ISLAND SOUND STUDY SAMPLING STATIONS

STATION	WATER COLUMN DEPTH (meters)	LOCATION						DESCRIPTION
		LATITUDE NORTH			LONGITUDE WEST			
		D	M	S	D	M	S	
A1	26	40	48	12	73	49	36	East of Whitestone Bridge
A2M	35	40	48	06	73	47	00	East of Throgs Neck Bridge
A3	25	40	50	30	73	45	18	Hewlett Point South of "29" Fl G 4 Sec
A4	35	40	52	18	73	44	06	Sands Point East of "25" Fl G 2.5 Sec
A5	13	40	53	54	73	41	12	2.6 nm East of Execution Lighthouse
B1S	15	40	56	42	73	40	00	Porgy Shoal South of R "40" Fl G 4 Sec
B2	20	40	56	06	73	39	12	Matinecock Point 1.6 nm North of Gong "21" Fl G 4 Sec
B3M	19	40	55	12	73	38	42	Matinecock Point 0.7 nm North of Gong "21" Fl G 4 Sec
B4	15	40	54	24	73	38	06	Matinecock Point South of Gong "21" Fl G 4 Sec
C1	19	40	57	18	73	34	48	Oak Neck Point 1.8 nm North of C "19"
C2	35	40	59	06	73	30	00	Lloyd Point 1.5 nm North of Bell "15" Fl 4 Sec
DI1	10	40	53	33	73	46	24	Davids Island North of "10A" Nun
DI2	6	40	53	40	73	46	00	Davids Island East of R "4" Nun
H-A3	3	40	55	24	73	43	12	Delancy Point South of C "1"
H-B	12	40	54	48	73	42	54	0.7 nm Southeast of Daymarker Fl R 4 Sec
H-C	8	40	51	54	73	40	30	Hempstead Harbor East of R "6" Bell
H-C1	11	40	53	12	73	41	42	Hempstead Harbor 2 nm East of Sands Point
H-D	7	40	50	42	73	39	36	Hempstead Harbor East of C "9"

In the area sampled by the Commission, dissolved oxygen conditions were better than those of 1991. Dissolved oxygen concentrations of below 3 mg/l were seldom observed in the deep bottom waters during the 1992 survey. Compared to 1991, the meteorological conditions in 1992 showed, on the average, cooler summer temperatures and frequent storms which tend to oxygenate the waters. Two new sampling stations, DI-1 and DI-2, were added at the request of NYS DEC in order to collect baseline data for a proposed waterfront mixed-use development on Davids Island in Westchester County, New York.

## NATIONAL ESTUARY PROGRAM

Established in 1984, the National Estuary Program (NEP) provides assistance to estuaries of national significance that are threatened by pollution, development or overuse. The NEP provides federal assistance to develop a Comprehensive Conservation and Management Plan (CCMP) for designated estuaries. Within the Interstate Sanitation District, 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 US EPA Regions I and II. The New York-New Jersey Harbor Estuary Program is being coordinated by the US 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 the final CCMP. As a result of the previously issued preliminary report on hypoxia which identified nitrogen as the limiting factor for the low dissolved oxygen, the LISES Policy Committee adopted a "no net increase" policy for nitrogen discharges as an interim measure until the study is complete. The States of Connecticut and New York have been implementing this policy during the past year. 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 has now been 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 available to all agencies.



## COMBINED SEWER OVERFLOWS

Subsequent to the Commission's CSO report and the first region-wide CSO Planning Conference of earlier years, and to technical meetings with the state environmental departments and the US 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 US EPA's national CSO strategy, the Commission's aim is to insure compatible region-wide CSO requirements.

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 AND SHELLFISHING

### 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.

As a follow-up to a 1991 meeting 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; in March 1992 the Commission hosted a meeting attended by personnel from various agencies in order to answer questions and solicit suggestions on the project.

To address the CSO, stormwater and nonpoint runoff problems related to opening areas in its District for swimming, the Commission is and will be addressing 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 is presently under way and 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 were obtained from existing information. The model was run by a contractor and the outputs were submitted to ISC during the summer and fall of 1992. ISC is presently evaluating the model results and looking at 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 now expected to be completed by the end of 1992 or early 1993. 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 is and will be seeking input from the involved agencies.

The results of the work currently being done by the Commission will be supplied to the New York-New Jersey Harbor Estuary Program. The HEP did not have to presently allocate any of its very limited funds for this modeling work, but was able to defer funding until the next budget cycle when work with the time variable model will most likely have to be performed.

### 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 (relay).



### III. AIR POLLUTION

#### GENERAL

The Commission's interstate air pollution program was initiated in 1962. Over the years, the program has focused on investigations, applied research, and advocating regional viewpoints on environmental issues. As in the past, the ISC continued to receive air pollution complaints; this past year, the complaints came exclusively from Staten Island. For the 12-month period ending September 30, 1992, a total of 144 air pollution complaints were received -- a decrease of 6.4% from that of the previous 12-month period.

For the fifth consecutive year, the Commission participated in -- although at a reduced level due to budget constraints -- the regional Ozone Health Message System that is activated during the summer months. Health advisories were issued on five days in June and August to the public when the ISC received information of unhealthy concentrations of ozone from the States of New Jersey, New York 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. Although the High Air Pollution Alert and Warning System did not have to be activated, on five days in October and November 1991, ISC sent messages to inform the public of unhealthy air quality due to smoke and particulates.

## AIR POLLUTION COMPLAINTS

More citizen complaints of disagreeable odors and airborne pollutants come from the New York-New Jersey border in the vicinity of Staten Island generates than from 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 still remain vacant. ISC's 24-hour-a-day answering service has been maintained and complainants are contacted during regular office hours. The Commission continues to handle complaints at the ISC office during regular office hours and, whenever necessary, Commission personnel are contacted by ISC's answering service during non-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, 1992, the Commission received a total of 144 complaints. This represents a decrease of 6.4% compared to the previous 12-month period. Although there was a decrease in the number of odor complaints for the past 12 months, the telephone calls received by ISC from citizens from all parts of Staten Island clearly illustrated their frustrations and the necessity of reactivating ISC's Staten Island field office -- something that can only happen by restoring funding to the Commission for personnel, equipment, and monitoring.

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.

Twenty-six Staten Island communities were the source of at least one complaint to the Commission during the period from October 1991 through September 1992. More odor complaints were reported from Annadale than from any other Staten Island community -- 17 complaints representing 11.8% of the total number of complaints reported. Except for 1983, 1990 and 1991, Annadale has been one of five communities reporting the most complaints for the past ten years. No complaints were registered from the four other boroughs of New York City or from elsewhere in the Interstate Sanitation District.

Based on the descriptions reported by the citizens, odors were classified into nine categories as shown in the table. The "garbage" and "others" categories were most frequently reported

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY COMMUNITY ON  
STATEN ISLAND FROM OCTOBER 1991 TO SEPTEMBER 1992

COMMUNITY	COMPLAINTS	
	NUMBER	% OF TOTAL
Annadale	17	11.8
Tottenville	16	11.1
Travis	12	8.3
New Springville	11	7.6
Great Kills	10	6.9
Eltingville	7	4.9
Richmond/Richmondton	6	4.1
Mariner's Harbor	5	3.5
Westerleigh	5	3.5
Castleton Corners	4	2.8
Sunnyside	4	2.8
West New Brighton	4	2.8
Grasmere	3	2.1
Dongan Hills	3	2.1
New Brighton	3	2.1
New Dorp	3	2.1
Stapleton	3	2.1
All others *	28	19.4
TOTALS	144	100.0

\* Represents 9 communities from which less than three complaints were reported per community.



DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY TYPE OF ODOR  
 FROM STATEN ISLAND COMMUNITIES  
 FROM OCTOBER 1991 TO SEPTEMBER 1992

TYPE OF ODOR	COMPLAINTS	
	NUMBER	% OF TOTAL
Garbage	40	27.8
Chemical	27	18.8
Sewage	11	7.6
Oil/Gasoline	10	6.9
Cat Urine	10	6.9
Sulfur/Eggy	8	5.6
Burning Rubber/Plastic	6	4.1
Natural Gas/Gassy	5	3.5
Others*	27	18.8
<b>TOTALS</b>	<b>144</b>	<b>100.0</b>

\* 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 1991 TO SEPTEMBER 1992

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 1991	0	3	3	6	4.2
November 1991	2	1	5	8	5.6
December 1991	0	5	1	6	4.2
January 1992	0	6	4	10	6.9
February 1992	1	3	3	7	4.9
March 1992	1	1	1	3	2.0
April 1992	2	6	0	8	5.6
May 1992	0	5	5	10	6.9
June 1992	4	4	16	24	16.7
July 1992	2	2	15	19	13.1
August 1992	4	16	5	25	17.4
September 1992	6	8	4	18	12.5
TOTALS	22	60	62	144	
% OF TOTAL	15.3	41.7	43.0		100.0

\* Includes Weekends and Holidays

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY DAY OF WEEK  
 FROM STATEN ISLAND COMMUNITIES  
 FROM OCTOBER 1991 TO SEPTEMBER 1992

MONTH	NUMBER OF COMPLAINTS						
	Day of Complaints*						
	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
October 1991	2	0	0	0	1	1	2
November 1991	0	3	2	2	0	1	0
December 1991	3	1	0	0	1	1	0
January 1992	2	2	0	2	3	1	0
February 1992	3	0	2	1	0	1	0
March 1992	0	1	0	0	1	0	1
April 1992	1	0	2	2	2	1	0
May 1992	1	1	0	1	2	1	4
June 1992	7	7	4	1	0	4	1
July 1992	6	6	3	0	1	3	0
August 1992	3	0	5	8	3	3	3
September 1992	8	0	2	2	2	2	2
TOTALS	36	21	20	19	16	19	13
% OF TOTAL	25.0	14.6	13.9	13.2	11.1	13.2	9.0

\* Includes Holidays



with 40 and 27 complaints, respectively, representing 46.6% of the total. It should be noted that the "chemical" category represents odors that could not be more specifically identified by the complainants.

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 43% were reported between 4:00 P.M. and midnight, and 41.7% between 8:00 A.M. and 4:00 P.M. This pattern 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 a high of 36 calls (25% of the total) on Mondays to a low of 13 calls (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 on Sundays. The table also shows that at least three complaints per month are logged and that a high of 24 were received during June 1992.

## OZONE HEALTH MESSAGE SYSTEM

For the fifth 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 US 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.

During 1992, even though the Commission's participation was somewhat reduced due to budgetary constraints, ISC took an active role in alerting the public to unhealthy conditions. On five days during June and August of 1992, when elevated levels of ozone existed in the Metropolitan Area, the ISC transmitted "health advisory" messages to the wire services and 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. Although the pollutant levels and stagnation advisory reports did not warrant activation of the system during this past year, on five days in October and November 1991, the Commission informed the public of unhealthy air quality in the form of smoke and particulates.



#### IV. LEGAL ACTIVITIES

During 1992, the Commission persevered at final negotiations on a multi-party federal court case in New Jersey District Court and collected substantial fines. In a second multi-party federal court case which also has a New Jersey situs, the ISC worked in tandem with the New Jersey Department of Environmental Protection and Energy (DEPE) to get agreement on a Decree which obligates the City of New York to implement more stringent water cleanliness procedures. The Commission continued its participation in an Administrative Hearing concerning New York State Pollutant Discharge Elimination System (SPDES) permits issued to the City of New York's wastewater treatment plants. ISC concluded its involvement in an Article 78 Proceeding in Westchester County, New York.

With regard to new initiatives, the Commission sought to intervene in an enforcement proceeding initiated by the New York State Department of Environmental Conservation (NYS DEC) against the City of New York's North River Water Pollution Control Plant (WPCP). Although the petition was denied, ISC has continued to play a major role in hearings and other maneuvers to avoid any permit violations by the plant. Finally, the ISC participated in two administrative hearings to settle the matter of the disposition of ash from the Brooklyn Navy Yard Resource Recovery Facility, as well as Exxon, USA's Bayway Refinery petition for relief from certain Commission Water Quality Regulations.

#### 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 in-

stallation of interim remedial equipment, including the super-boom; and the hiring of an independent monitor. The Order also provided 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 and Groups Against Garbage (both citizen groups), and the defendant, the City of New York.

In 1988, the plaintiffs in this case filed motions requesting modification of the Consent 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.

During 1992, the Commission's request for assurances that there be monies set aside and dedicated solely to the design and construction of the single-barge enclosed unloading system were met. With only a minor adjustment in compliance dates, a draft Consent Decree was accepted by the parties this past spring. Since then the Township of Woodbridge has voiced new misgivings concerning the Decree. The Township of Woodbridge insists on a provision in the Consent Decree to the effect that there will be no solid waste washups on New Jersey shores from the Fresh Kills Landfill. The City of New York has countered with a provision that recognizes a Reservation of Rights Clause to seek monetary damages for cleanup costs directly attributable to violations of the Consent Decree. It now appears likely that a final Consent Decree will be negotiated before the end of the 1992 calendar year.



## 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 Water Quality 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 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 US EPA and NJ DEPE (formerly 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 US 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.

### West New York

In mid-December 1991, on behalf of the parties, the ISC submitted a proposal to the West New York Municipal Utilities Authority (WNYMUA) to settle claims for stipulated penalties. The proposal purported to be a global settlement that would include NJ DEPE. That agency had entered into a separate Consent Decree citing WNYMUA for violations of interim limitations which also violated the federal Consent Order. The total monetary exposure for penalties imposed upon WNYMUA as of January 1992 was negotiated at \$180,500. Although the attorneys representing WNYMUA were recommending acceptance, the final decision rested with the Mayor. The parties resolved to make a motion under the Dispute Resolution Clause of the Consent Decree to resolve the



matter in court if there was no final acceptance by February. A confirmation of WNYMUA's acceptance was received in March of 1992 and in May the Township Council passed a resolution adopting the settlement. ISC's share of the proceeds was approximately \$45,000.

### Hoboken

Following ISC's review of monthly progress reports and a request by the Hoboken-Union City-Weehawken Sewage Authority (HUCWSA) to review interim TSS limits, it was determined that penalties could be levied. By late winter 1992, several issues remained to be resolved: sewer bans, stipulated penalties and Force Majeure claims. The parties continue to be against lifting a sewer hookup moratorium. There has yet to be a final determination on Force Majeure claims and while some discussion of a possible credit for achieving final limits by January 1993 has taken place, that has not been finally resolved. The issue of interim penalties also remains unresolved. Negotiations and the gathering of data is ongoing.

### NEW YORK CITY SEWAGE TREATMENT PLANT PERMIT HEARINGS

The ISC brought suit in State Supreme Court in Queens County, New York in November 1988 (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 1991; 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 de-

tailed all applicable standards.

At an October 1991 parties meeting, it was agreed that a March 1992 hearing date should be set for all unresolved issues. Subsequently, NYS DEC took a strong stance insisting that NYC DEP had to satisfy all parties on three counts: the adequacy of interim floatables measures, the actual timetables involved in the schedules for dual tracking of CSO and floatables abatement, and additional structural controls for floatables. The intervenors had previously taken the position not to accept a floatables abatement strategy that proposed waiting until the completion of the facility planning process for CSO abatement.

Negotiations on an ambitious proposal to address floatables continued until the end of June 1992 when NYS DEC and NYC DEP entered into a Consent Order. At a subsequent meeting with the Administrative Law Judge it was agreed that the terms of the Consent Order would be incorporated into the permits. At the very least, the ALJ directed that the incorporation address the procedure for permit modification and the risk of multiple enforcement of the Order and the permits. The parties were given until late summer to submit any issues that they wished to proffer as sub-issues for adjudication on floatables abatement. By the fall, the process of submitting replies and sur-replies continued with the substitution of new counsel for NYC DEP.

The ALJ has set December 1992, as a tentative date for resolution of the untreated discharge issue as well as final incorporation of the Commission's Water Quality Regulations into the permits. Negotiations as to nutrient removal are ongoing.

#### 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 Environmental 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. 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 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.

Among the issues settled to which 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 ISC was added as a necessary party to an Article 78 Proceeding brought by the City of Yonkers in 1991 (Matter of City of Yonkers v. Westchester County, NYS DEC, ISC, App. Div. 2nd), 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 an 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.

In August 1991, the County Court annulled the County's negative declaration finding that the County had been arbitrary and capricious in failing to consider alternatives to compel the removal of infiltration and inflow. ISC joined NYS DEC and Westchester County in appealing, although ISC's appeal was not filed until January 1992. ISC's rationale for appealing was that the County Court decision appeared to invalidate the stipulation. In late February, a four judge panel of the Appellate Division heard the appeal.



In mid-June 1992, the Appellate Division found that the negative declaration was a proper exercise of the County's discretion. They also ruled that the stipulation had not been invalidated by the lower court decision. Thus the Sewer System Evaluation Study continued in full force and ISC's rights were preserved.

#### ENFORCEMENT PROCEEDING AGAINST NORTH RIVER WATER POLLUTION CONTROL PLANT

During April 1992, after the Commission became aware of NYS DEC's negotiation of an Administrative Consent Decree with the City of New York to settle all of the issues raised by the cited violations at the North River WPCP, ISC made a motion to intervene. Motivated by the Commission's repeated opposition to settlement by Consent Decree of permit limitations that are properly the subject of a hearing before an Administrative Law Judge, ISC sought entry and was rebuffed by NYS DEC.

Nonetheless, the Commission has sought publication of this viewpoint on this issue by testifying at public hearings and offering the availability of expert consultation. The North River WPCP has taken on greater significance because of the proposed mixed-use development project, Riverside South. Effluent projections for this project alone is estimated to range from 1 to 3 MGD of municipal sewage. This additional loading, as well as effluent inputs from many other proposed and partially completed projects in the North River drainage basin, would exacerbate the already taxed facility which is operating at or over its capacity.

#### BROOKLYN NAVY YARD RESOURCE RECOVERY FACILITY PERMIT HEARING

In June 1987, after petitioning for party status in a NYS DEC Administrative Hearing on permit requirements for a municipal solid waste incinerator, the Commission was granted party status. ISC was essentially interested in the cumulative impact and the potential for affecting environmental quality in the region. This facility was one of twenty-six (26) other resource recovery facilities planned for the Metropolitan Area.

The parties involved are the ISC and co-intervenors Environmental Defense Fund (EDF), New York Public Interest Research Group (NYPIRG), Consolidated Edison of New York, Brooklyn Solid Waste Advisory Board (SWAB), numerous selected officials and the Private Sanitation Union.

Two issues remained subsequent to a November 1988 decision of the Commissioner: the disposition of ash from the facility and the implementation of a recycling program. In mid-September 1992, an issues conference was convened. The City has submitted

and is awaiting final approval of its recycling program from NYS DEC, thus, this was not an issue ripe for adjudication.

Final approval of the permits requested by the City must await identification of "an ash disposal site that fully complies with regulatory requirements." Such a facility was identified by the City in late October, a facility based in the State of Virginia. As the facility is not within the confines of the Interstate Sanitation District, its acceptance as a permitted facility could not impact District waterways, thus, ISC reserved their rights without participating in this portion of the proceeding. ISC's recommendation to list recycled matter in tonnage instead of percentages in the permit had already been accepted and implemented.

WASTEWATER TREATMENT PLANTS  
DISCHARGING INTO  
INTERSTATE SANITATION DISTRICT WATERS  
1 9 9 2

<u>Plant</u>	<u>ISC Receiving Water Classification</u>	<u>Date of Const.</u>	<u>Flow MGD</u>		<u>Type of Treatment</u>	<u>Estimated Population Served</u>
			<u>Average</u>	<u>Design</u>		
<u>CONNECTICUT</u>						
<u>Fairfield County</u>						
Bridgeport - East Side	B-1	1973+	8.6	12.0	Secondary (AS)	45,000
- West Side	B-1	1973+	25.2	30.0	Secondary (AS)	113,000
Fairfield	A	1982+	7.4	9.0	Secondary (AS)	45,000
Greenwich	A	1982+	9.7	8.5	Secondary (AS)	54,000
Norwalk	B-1	1980+	13.3	15.0	Secondary (AS)	80,000
Stamford	B-1	1991+	15.7	20.0	Secondary (AS)	90,000
Stratford	A	1992+	8.4	11.5	Secondary (AS)	50,000
Westport	A	1975+	2.0	2.8	Secondary (AS)	14,000
<u>New Haven County</u>						
Milford - Beaver Brook	A	1987+	2.1	3.1	Secondary (AS)	16,000
- Housatonic	A	1987	5.9	8.0	Secondary (AS)	21,500
New Haven - East Shore	B-1	1989+	38.6	40.0	Secondary (AS)	215,000
West Haven	B-1	1988+	-	12.5	Secondary (AS)	55,000
<u>NEW JERSEY</u>						
<u>Bergen County</u>						
Edgewater	B-1	1989+	3.44	6.0	Secondary (AS)	21,000
<u>Essex County</u>						
Passaic Valley Sewerage Commissioners	B-1	1988+	278.2	330.0	Secondary (AS)	1,500,000
<u>Hudson County</u>						
Hoboken	B-1	1955	11.2	20.7	Primary	81,000
North Bergen M. U. A. - Woodcliff	B-1	1990+	2.0	2.65	Secondary (TF)	20,000
West New York	B-1	1982+	9.2	10.0	Secondary (TF)	57,000
<u>Middlesex County</u>						
Middlesex County Utilities Authority	A	1991+	109.4	120.0	Secondary (AS)	890,000
<u>Monmouth County</u>						
Cliffwood Beach	A	1964	0.43	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	1992+	61.3	85.0	Secondary (AS)	500,000
Linden Roselle Sewerage Authority	B-2	1989+	11.8	17.0	Secondary (AS)	60,000
Rahway Valley Sewerage Authority	B-2	1991+	25.6	35.0	Secondary (AS)	175,000
<u>NEW YORK</u>						
<u>Nassau County</u>						
Bay Park	A	1992+	52.7	70.0	Secondary (AS)	510,000
Belgrave Sewer District	A	1988+	1.34	2.0	Secondary (TF)	12,000
Cedar Creek	A	1992+	53.9	55.0	Secondary (AS)	460,000
Cedarhurst	A	1968+	0.78	1.0	Secondary (TF)	7,000
Cold Spring Harbor Laboratory*	A	1975	0.052	0.075	Physical/Chemical	550 - 600
Glen Cove	A	1981+	-	8.0	Secondary (AS)	28,000
Great Neck Sewer District	A	1990+	2.44	3.8	Secondary (TF)	13,000
Great Neck Village	A	1988+	0.96	1.5	Secondary (TF)	9,000
Inwood	A	1989+	0.92	2.5	Secondary (TF)	8,000
Jones Beach	A	1990+	0.08	2.5	Secondary (TF)	Seasonal
Lawrence	A	1966+	1.14	1.5	Secondary (TF)	6,200



WASTEWATER TREATMENT PLANTS  
DISCHARGING INTO  
INTERSTATE SANITATION DISTRICT WATERS  
1 9 9 2

Plant	ISC Receiving Water Classification	Date of Const.	Flow MGD		Type of Treatment	Estimated Population Served
			Average	Design		
<u>NEW YORK (Continued)</u>						
<u>Nassau County (Continued)</u>						
Long Beach	A	1990+	6.0	6.36	Secondary (TF)	40,000
Oyster Bay Sewer District	A	1992+	1.44	1.8	Secondary (TF)	8,500
Port Washington Sewer District	A	1991+	2.86	4.0	Secondary (TF)	30,000
West Long Beach Sewer District	A	1986+	0.66	1.5	Secondary (TF)	5,000
<u>New York City</u>						
<u>Bronx County</u>						
Hunts Point	B-1	1977+	142.1	200.0	Secondary (AS)	630,000
<u>Kings County (Brooklyn)</u>						
Coney Island	A	1965+	102.2	100.0	Secondary (AS)	602,000
Newtown Creek	B-1	1967	297.3	310.0	Secondary (AS)	1,039,000
Owls Head	B-1	1991+	125.5	120.0	Secondary (AS)	761,000
Red Hook	B-1	1987	39.1	60.0	Secondary (AS)	192,000
26th Ward	A	1975+	69.3	85.0	Secondary (AS)	271,000
<u>New York County (Manhattan)</u>						
North River	B-1	1986	176.7	170.0	Secondary (AS)	584,000
Wards Island	B-1	1979+	266.7	250.0	Secondary (AS)	1,004,000
<u>Queens County</u>						
Bowery Bay	B-1	1978+	127.8	150.0	Secondary (AS)	727,000
Jamaica	A	1978+	78.9	100.0	Secondary (AS)	632,000
Rockaway	A	1978+	24.1	45.0	Secondary (AS)	94,000
Tallman Island	B-1	1979+	60.5	80.0	Secondary (AS)	388,000
<u>Richmond County (Staten Island)</u>						
Arthur Kill Correctional Facility*	B-2	1969	0.13	0.1	Secondary (AS)	1,000
Atlantic Village	A	1985	0.043	0.076	Secondary (AS)	-
Elmwood Park Condominiums	B-1	1974	0.8	2.0	Primary	20,000
IS-7*	A	1964	0.004	0.021	Extended Aeration w/ Sand Filtration	1,000
Mount Loretto Home - Plants #1 & #2*	A	1962	0.041	-	Septic Tank	1,000
Oakwood Beach	A	1979+	24.4	40.0	Secondary (AS)	152,000
Point East Condos*	A	1986	-	0.16	Extended Aeration w/ Sand Filtration	300
Port Richmond	B-2	1979+	40.4	60.0	Secondary (AS)	172,000
Princess Bay*	A	1987	0.05	0.16	Extended Aeration w/ Sand Filtration	500
PS-3*	A	1969	0.02	0.004	Extended Aeration	1,000
PS-42*	B-2	1967	0.006	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	Extended Aeration w/ Sand Filtration	-
Village Green*	B-2	1970	0.45	1.0	Extended Aeration	2,400
Woodbrook Village*	B-1	1980	0.37	0.7	Extended Aeration	3,700
<u>Rockland County</u>						
Joint Regional Sewerage Board-Town of Haverstraw	A	1980+	4.95	8.0	Secondary (AS)	33,000
Orange & Rockland Utilities*	A	1984+	0.003	0.012	Secondary (AS)	Industrial
Orangetown Sewer District	A	1985+	8.1	8.5	Secondary (TF)	52,000

WASTEWATER TREATMENT PLANTS  
DISCHARGING INTO  
INTERSTATE SANITATION DISTRICT WATERS  
1992

Plant	ISC Receiving Water Classification	Date of Const.	Flow MGD		Type of Treatment	Estimated Population Served
			Average	Design		
<u>NEW YORK (Continued)</u>						
<u>Rockland County (Continued)</u>						
Palisades Interstate Park						
Bear Mountain Plant	A	1967+	0.07	0.25	Secondary (TF)	Seasonal
Tallman Mountain Plant	A	1968	-	0.01	Secondary (AS)	Seasonal
Rockland County Sewer District #1	A	1989+	17.9	26.0	Secondary (RD)	160,000
<u>Suffolk County</u>						
Story Point	A	1985+	0.92	1.0	Secondary (AS)	10,000
Huntington Sewer District	A	1988+	1.87	2.5	Secondary (RD) (TF)	25,000
Northport	A	1973+	0.32	0.3	Secondary (AS)	3,500
Suffolk County Sewer District #1	A	1988+	0.63	2.5	Secondary (RD)	12,000
Suffolk County Sewer District #3	A	1989+	21.1	30.0	Secondary (AS)	215,000
Suffolk County Sewer District #6	A	1973+	0.59	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+	3.0	5.0	Secondary (AS)	25,000
Buchanan	A	1990+	0.17	0.50	Secondary (AS)	2,000
Kings Ferry Sewer Association*	A	1992+	0.035	0.05	Secondary (AS)	600
Mamaroneck	A	1965+	13.0	18.0	Primary	80,000
Metro North (Harmon Shop)*	A	1985+	0.05	0.40	Physical/Chemical	500
New Rochelle	A	1982+	15.2	13.6	Secondary (AS)	80,000
Ossining	A	1981	4.8	7.0	Secondary (AS)	40,000
Peekskill	A	1980+	6.1	10.0	Secondary (AS)	35,000
Port Chester	B-1	1990+	4.4	6.0	Secondary (RD)	26,000
Springvale Apartments Company*	A	1991+	0.1	0.13	Secondary (RD)	1,000
Yonkers Joint Treatment	A	1988+	78.4	92.0	Secondary (AS)	500,000
<u>FEDERAL &amp; MILITARY</u>						
Camp Smith - (Westchester Co.)	A	1988+	0.05	0.24	Secondary (TF)	2,000
FDR Veterans Administration	A	1982+	0.18	0.4	Secondary (TF)	3,000
Medical Center (Westchester Co.)						
Gateway National Recreation Area (Floyd Bennett Field, Kings Co.)	A	1981+	-	0.4	Secondary (TF)	2,000
Military Ocean Terminal (Hudson Co.)	B-1	1982+	0.1	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 1992

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, 1991 to June 30, 1992:

CASH BOOK BALANCE AS OF JUNE 30, 1991-----\$316,162.46

RECEIPTS

Connecticut - FY '92	\$ 3,333.00	
New York - FY '92	288,300.00	
New Jersey - FY '92	260,000.00	
EPA - FY '91	49,403.00	
EPA - FY '92	210,588.00	
Interest	9,413.33	
Miscellaneous Receipts	<u>24,631.62</u>	
TOTAL RECEIPTS		<u>845,668.95</u>
	Sub-Total	\$1,161,831.41

DISBURSEMENTS

TOTAL DISBURSEMENTS 953,403.67

CASH BOOK BALANCE ON June 30, 1992 \$208,427.74  
=====

Insured Money Market Account	\$197,602.72
Checking Account	<u>10,825.02</u>
	\$208,427.74 =====



## G L O S S A R Y

ALJ	administrative law judge
BGD	billion gallons per day
BNR	biological nutrient removal
BOD	biochemical oxygen demand
CCMP	Comprehensive Conservation and Management Plan
CSO	combined sewer overflow
CWA	Clean Water Act
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
EIS	environmental impact statement
EPA	Environmental Protection Agency
FY	fiscal year
HEP	Harbor Estuary Program
HRFA	Hudson River Fisherman's Association
HUCWSA	Hoboken-Union City-Weehawken Sewerage Authority
HVAC	heating, ventilating and air conditioning
I/I	infiltration/inflow
ISC	Interstate Sanitation Commission
LISES	Long Island Sound Estuary Study
MGD	million gallons per day
MUA	Municipal Utilities Authority
NEP	National Estuary Program
NPDES	National Pollutant Discharge Elimination System
NRDC	Natural Resources Defense Council
N/SPDES	National/State Pollutant Discharge Elimination System
NYBRP	New York Bight Restoration Plan
NYPIRG	New York Public Interest Research Group
NYC	New York City
NYS	New York State
OBDA	Ocean Dumping Ban Act
O&M	Operation and Maintenance
punch list	construction contractors' miscellaneous repairs and omissions encountered during a project which are necessary to complete before final acceptance
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
SWAB	Solid Waste Advisory Board
TSS	total suspended solids
WLA	wasteload allocation
WNY	West New York
WPCP	water pollution control plant