

INTERSTATE SANITATION COMMISSION

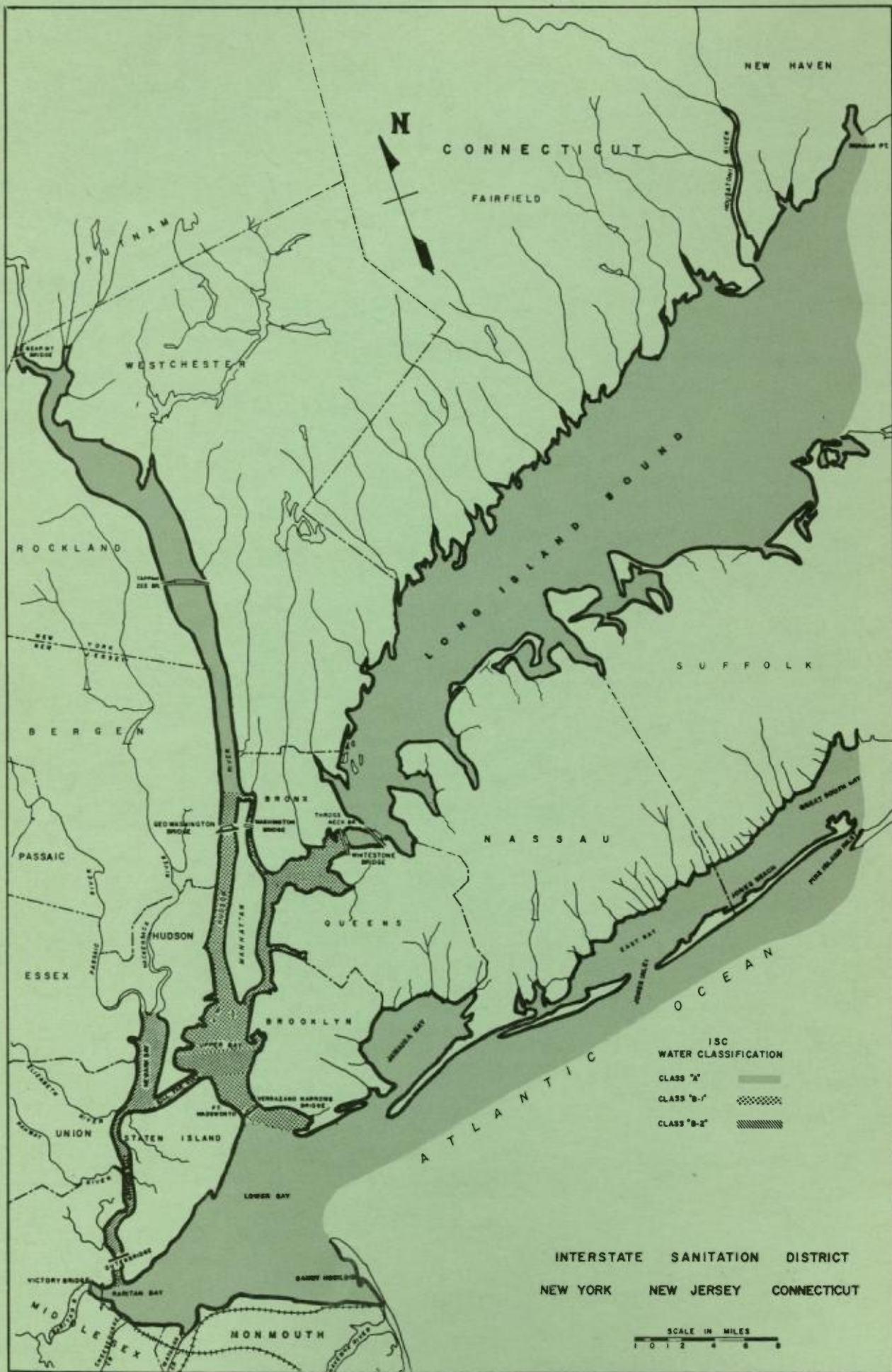
A TRI-STATE ENVIRONMENTAL AGENCY



1989

ANNUAL REPORT

NEW YORK NEW JERSEY CONNECTICUT



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R E P O R T
O F T H E
I N T E R S T A T E S A N I T A T I O N C O M M I S S I O N

O N T H E
W A T E R P O L L U T I O N C O N T R O L A C T I V I T I E S
A N D T H E
I N T E R S T A T E A I R P O L L U T I O N P R O G R A M

INTERSTATE SANITATION COMMISSION

A TRI-STATE ENVIRONMENTAL AGENCY

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212-582-0380

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Christopher J. Daggett

Lester H. Grubman

Director -

Chief Engineer

Alan I. Mytelka, Ph.D.

January 24, 1990

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

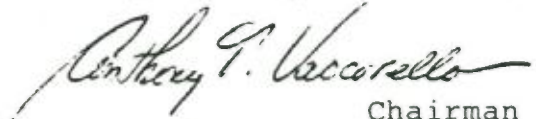
Your Excellencies:

The Interstate Sanitation Commission respectfully submits its report for the year 1989.

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

Respectfully submitted,

For the State of New York


Chairman

For the State of Connecticut


Vice-Chairman

For the State of New Jersey


Vice-Chairman

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STATEMENT OF THE CHAIRMAN
OF THE
INTERSTATE SANITATION COMMISSION

1989 emerges as a year of dramatic irony, a year of peaks and valleys, in the 53-year history of the Interstate Sanitation Commission. While it was a year in which the Commission lost considerable funding, it was also a year of solid environmental achievement. Despite our loss of budget, we were able to execute key aspects of our programs in sampling and testing as well as regulation and enforcement.

On key environmental matters -- such as the discharge permits for New York City's wastewater treatment plants, an issue which affects the water quality of the entire tri-state area -- the Commission's position has been solidly vindicated in the courts.

In addition, 1989 has seen the ISC take the lead in battling the single greatest source of pollution in the region -- combined sewer overflows. Our region-wide CSO Conference, in conjunction with the release of our original research in the form of a Combined Sewer Outfalls Report identifying CSOs within the District, establishes a foundation for what should be a long-term regional program to overcome pollution by CSOs.


Yet, because the Commission stuck to its guns and insisted on high water quality standards on behalf of the entire tri-state region, because the Commission fought unwarranted waivers and variances and because the Commission refused to abdicate its responsibilities in regulation and enforcement, we had to continue to battle for our very existence.

Legislators of both parties, supported by environmentalists and citizens' groups, came to our defense. Nevertheless, we suffered severe budget cuts instigated by some state agencies.

As a result, I must regretfully report that the Commission suffered a one-third loss in our invaluable engineering and technical staff, which forced us to reduce our sampling and monitoring activities at wastewater treatment plants. In addition, sampling of the Long Island Sound was cancelled.

Looking toward next year, it is our goal to re-establish Long Island Sound sampling and once again sample the Hudson River with the hope that our results will lead to the reopening of additional portions of these waterways for fishing and recreational purposes.

On a positive note, we are encouraged by the progress we have made on behalf of the environment in such matters as enforcement and in the continuing battle to mitigate the effects of combined sewer overflows. We are optimistic that our full funding will be restored so that we can continue to shoulder our responsibilities -- and exercise our mandate to take the regional point of view in all matters concerning water and air pollution control -- on behalf of all citizens within our District in the tri-state area.



Anthony T. Vaccarello
Chairman

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I. EXECUTIVE SUMMARY

The creation of the Interstate Sanitation Commission was a direct result of the recommendations of the Tri-State Treaty Commission of 1931. The States of New York and New Jersey agreed to enact the Tri-State Compact in 1936; it was ratified by Connecticut in 1941. As a regulatory agency, it is the Commission's mandate to address the abatement of existing water pollution and the control of future negative impacts to the tidal waters of the metropolitan area. In 1962, air pollution was added to the Commission's regional responsibilities. The Commission was designated as the official planning and coordinating agency for the New Jersey-New York-Connecticut Air Quality Control Region in 1970.

During the 1980's, the Commission's regulatory actions denying concurrence with applications for less than secondary treatment for 22 water pollution control plants and passage of a year-round disinfection requirement were made in order to further improve the waters of the District. These efforts, in cooperation with its member states, have resulted in the upgrading of water quality classifications in several water bodies. The reduction of coliform bacteria concentrations have enabled the New York State Department of Conservation in 1987 to extend the season for 16,000 acres of shellfish beds in the Atlantic Ocean off the Rockaways for direct harvesting; and subsequently removed all restrictions on December 14, 1988. The New Jersey Department of Environmental Protection remanded the seasonal restriction for 13,000 acres in Sandy Hook/Raritan Bays for depuration harvesting in 1989.

By June 30, 1989, operations at the Commission were severely curtailed due to a 35% budget cut. The States' action resulted in ISC employee layoffs and several more employees resigning. Most of the ambient and effluent water quality sampling programs were abandoned or drastically reduced for the fiscal year. The air pollution programs were nearly eliminated except for the Staten Island odor complaint answering service.

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

WATER POLLUTION

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

A great deal of planning and construction has been underway and will provide for the reduction of pollution from municipal and industrial wastewaters discharging into District waters. It is estimated that more than \$3.7 billion has been allocated by municipalities in the District for this purpose.

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

- party status requiring the New York State Department of Environmental Conservation (NYS DEC) to hold hearings in regards to the final State Pollutant Discharge Elimination System (SPDES) permits which that department issued for the 14 New York City water pollution control plants (WPCPs).
- party status for an adjudicatory hearing regarding SPDES permit modifications at the Yonkers Joint Wastewater Treatment Plant in Westchester County, N.Y.
- actively involved with five Hudson County, New Jersey communities as to upgrading their WPCPs to meet Commission and federal standards.
- actively involved with the Brooklyn Navy Yard Resource Recovery Facility adjudicatory hearing.
- monitoring of the New York City Fresh Kills Landfill operations by land and sea to check compliance with a 1987 Consent Order.

ISC completed a study in 1988 giving a regional perspective to the combined sewer overflow (CSO) problems that exist in the Interstate Sanitation District. The Commission hosted an all-day CSO conference in March, 1989 and was able to bring together representatives of federal agencies, all three member states, and local agencies/municipalities to discuss CSOs on a regional basis.

A region-wide inventory of waterfront development projects within the District was updated again. A continuing concern is

how additional wastewater from residential and mixed-use buildings, as well as hotels, marinas and recreational facilities, will be treated.

The Commission was awarded a grant by the U.S. Environmental Protection Agency (U.S. EPA) for continued work on the Long Island Sound Estuary Study, part of the U.S. EPA's National Estuary Program. ISC is also a member of the Management Committee for this study.

For the study, remote automatic monitors at two depths were established in the East River to collect conductivity and dissolved oxygen data for the development of the hydrodynamic and water quality models for Long Island Sound. Due to anomalies in the salinity data, the ISC research vessel, R/V Natale Colosi, was used to conduct water quality survey transects across the East River in conjunction with the remote monitors. Meters were used for immediate data collection; water samples were also collected for later analysis.

Staff members participated in another designated waterway of the National Estuary Program --- the New York-New Jersey Harbor. Participation on several work modules addressed floatables, pathogens and toxics.

ISC continued to monitor waste discharges from public and private treatment plants to check compliance with SPDES limitations. One intensive survey was conducted in Jamaica Bay using the R/V Natale Colosi. Plans for surveys in the Connecticut waters of Long Island Sound were cancelled due to budget cuts.

In July, a boat inspection trip was held in a portion of the Interstate Sanitation District: Long Island Sound and several embayments. Government officials, the private sector and the press had a firsthand view of water quality progress, some environmental problems and many recreational/commercial assets of the region.

Since 1981, the Commission has been involved with the U.S. Army Corps of Engineers' Dredged Material Disposal Management Plan for the Port of New York and New Jersey. Since September 1987, a staff member has been serving as chairman of the Public Involvement Coordination Group.

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

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

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

AIR POLLUTION

The Commission continued its role as coordinator of the High Air Pollution Alert and Warning System in the New Jersey-New York-Connecticut Air Quality Control Region. However, its operation was drastically reduced because of budget restrictions and the absence of NYS DEC participation.

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

During the 12 months from October 1988 through September 1989, the Commission received 620 air pollution complaints -- a decrease of 40% over the previous 12-month period. The vast majority of calls came from Staten Island residents. Unfortunately, the Commission was forced to lay off its entire air pollution staff and close the Staten Island field office; the 24-hour answering service was maintained.

II. WATER POLLUTION

GENERAL

During 1989, over \$3.7 billion was allocated for 129 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 \$512 million for 24 completed projects, \$1.469 billion for 65 projects in progress, and \$1.757 billion for 40 future projects. These expenditures are being used for constructing new facilities and upgrading existing facilities in order to provide adequately treated effluents for discharge into District waters. These figures do not include the monies spent by industries for pollution control.

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







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.

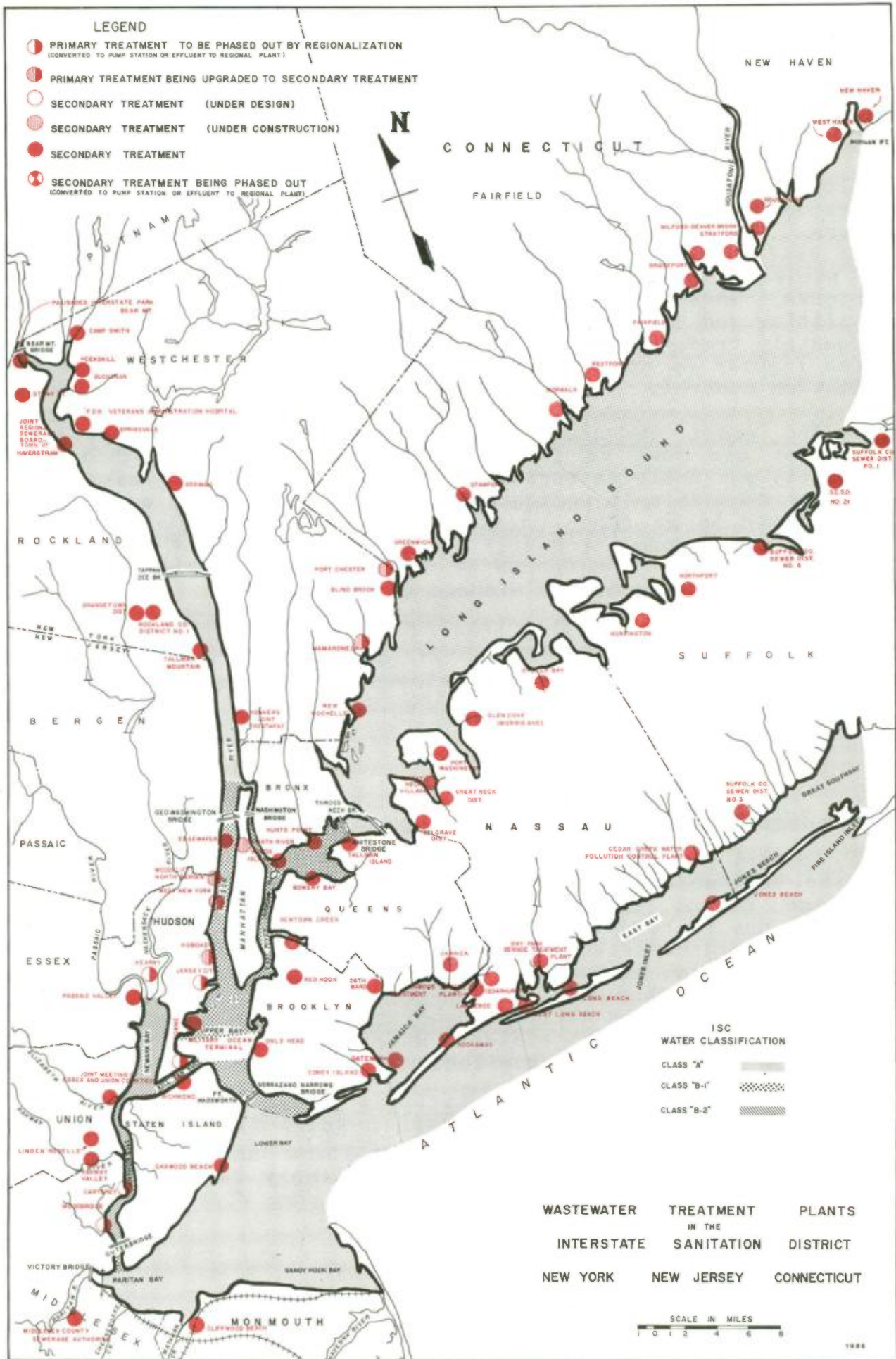
Water Pollution Control Projects

In past years, considerable space was devoted in this Report to the engineering studies and construction activities in all drainage basins within the Interstate Sanitation District. However, due to budget and personnel constraints, major projects around the region will be highlighted. The information presented was obtained 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, 1989.


In Connecticut, the municipalities of New Haven and Norwalk have started sewer separation work in order to eliminate CSOs; expenditures are estimated at \$25 million and \$1.5 million, respectively. In lieu of upgrading a primary facility, the New Haven-Boulevard plant was converted to a pump station at a cost


LEGEND


-  PRIMARY TREATMENT TO BE PHASED OUT BY REGIONALIZATION
(CONVERTED TO PUMP STATION OR EFFLUENT TO REGIONAL PLANT)
-  PRIMARY TREATMENT BEING UPGRADED TO SECONDARY TREATMENT
-  SECONDARY TREATMENT (UNDER DESIGN)
-  SECONDARY TREATMENT (UNDER CONSTRUCTION)
-  SECONDARY TREATMENT
-  SECONDARY TREATMENT BEING PHASED OUT
(CONVERTED TO PUMP STATION OR EFFLUENT TO REGIONAL PLANT)



ISC
WATER CLASSIFICATION

CLASS "A" 

CLASS "B-1" 

CLASS "B-2" 

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



of \$12 million. All flows were diverted to the New Haven-East Shore plant during May, 1989.

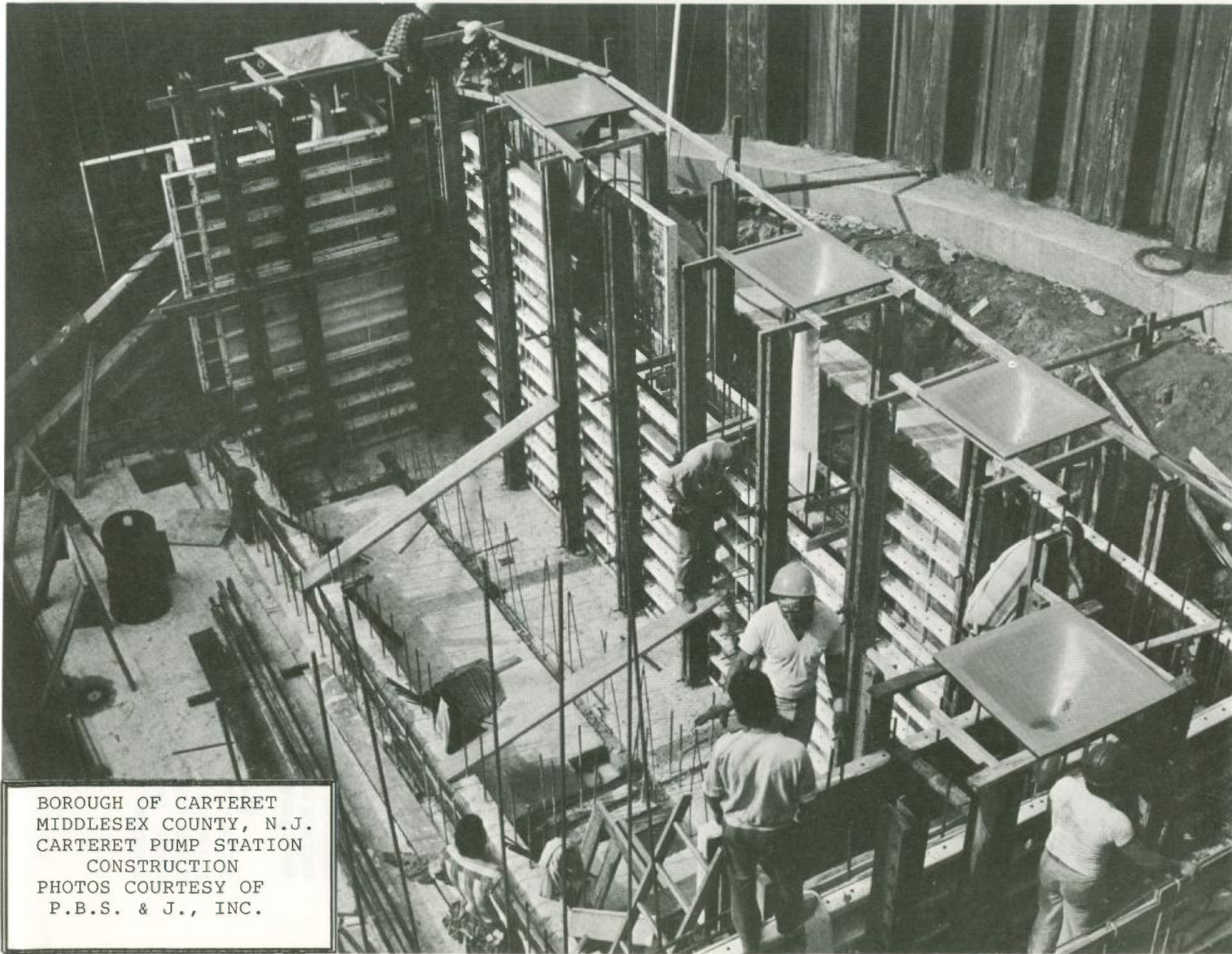
The South Bay Project in Middlesex County, New Jersey is essentially completed. The Old Bridge Municipal Utilities Authority, Perth Amboy, Sayreville, and South Amboy completed five (5) pump stations costing nearly \$16 million. Gravity interceptors and force mains were installed and connected to the 120 MGD secondary facility maintained by the Middlesex County Utilities Authority (MCUA).

MCUA made major modifications to their existing facility at an estimated cost of \$10.2 million in order to accept flows from the aforementioned communities. Flows were diverted to MCUA between July and September 1989. It is anticipated that flows from Carteret and Woodbridge will also be diverted for treatment at MCUA during January, 1990. Two pump stations and accompanying force main construction have accrued over \$52 million in costs. Carteret recently completed sewer separation work at a cost of \$9.5 million.

Hudson County, New Jersey, subsequent to legal measures taken by ISC and the U.S. EPA, has been upgrading and eliminating primary discharges. During late fall 1989, the two Jersey City primary plants diverted their flows for treatment at the Passaic Valley Sewerage Commissioners' (PVSC) secondary WPCP. It is anticipated that the primary facility in Kearny will complete a 16 MGD pump station and divert flows to PVSC by December, 1990. Additional information on these and other Hudson County, New Jersey communities are detailed in the Legal Activities section of this Report.

Nassau County, New York is undergoing extensive expansion and rehabilitation work. The Bay Park and Cedar Creek WPCPs are engaged in phased construction programs to enhance, modify and improve facility processes. Several phases are complete and in progress; combined expenditures of \$138 million are planned for future construction phases at these plants. The Great Neck Sewer District is expanding their secondary facility to 3.8 MGD as well as rehabilitating a pump station with accompanying force mains at a cost of nearly \$9 million. The Port Washington Water Pollution Control District is spending nearly \$27 million for capacity expansion, collection system rehabilitation and modernization of two pump stations.

The New York City Department of Environmental Protection has 14 WPCPs under its auspices. The Red Hook WPCP started to provide secondary treatment during May, 1989. The 60 MGD facility cost approximately \$152.4 million. Collection system work included new pump stations and force mains, as well as renovating tide gates, to eliminate dry weather flows impacting

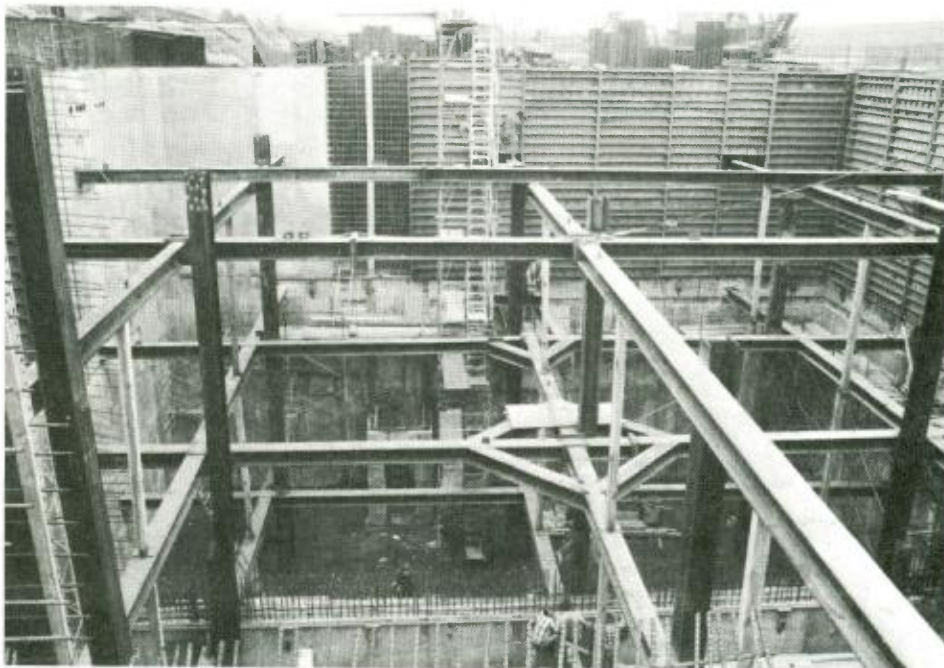


BOROUGH OF CARTERET
MIDDLESEX COUNTY, N.J.
CARTERET PUMP STATION
CONSTRUCTION
PHOTOS COURTESY OF
P.B.S. & J., INC.

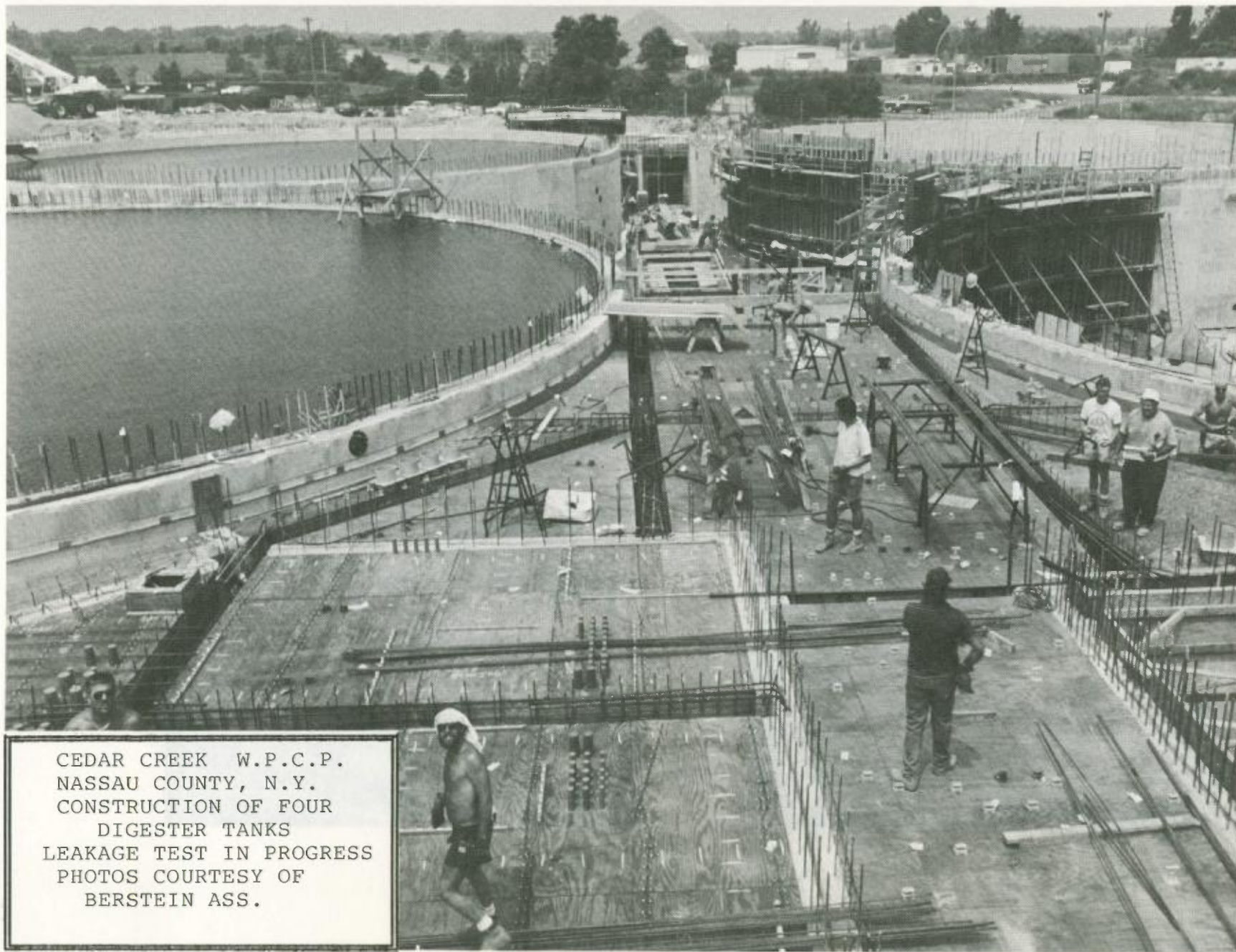
TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, N.J.



WOODBRIDGE AVENUE PUMP STATION
CONSTRUCTION



PHOTOS COURTESY OF
P.B.S. & J. INC.



CEDAR CREEK W.P.C.P.
NASSAU COUNTY, N.Y.
CONSTRUCTION OF FOUR
DIGESTER TANKS
LEAKAGE TEST IN PROGRESS
PHOTOS COURTESY OF
BERSTEIN ASS.

Gowanus Canal. These final costs amounted to over \$23 million. The 170 MGD North River WPCP, providing primary treatment with disinfection since April, 1986, is 88.6% complete for the secondary treatment facilities.

New York City's CSO abatement program is a multi-year, \$1.5 billion effort. The ongoing second phase is addressing facilities planning which is prioritizing the CSOs by drainage basin and waterway. There are four single tributary projects, three tributary groups delineated by drainage basin and four area-wide projects.

Rockland County Sewer District No. 1 has recently completed its 26 MGD secondary plant. A collection system upgrading involved the construction of 10 new pump stations with accompanying interceptors and force mains as well as the modification and expansion of one pump station. A final cost estimate for all work amounted to \$190 million.

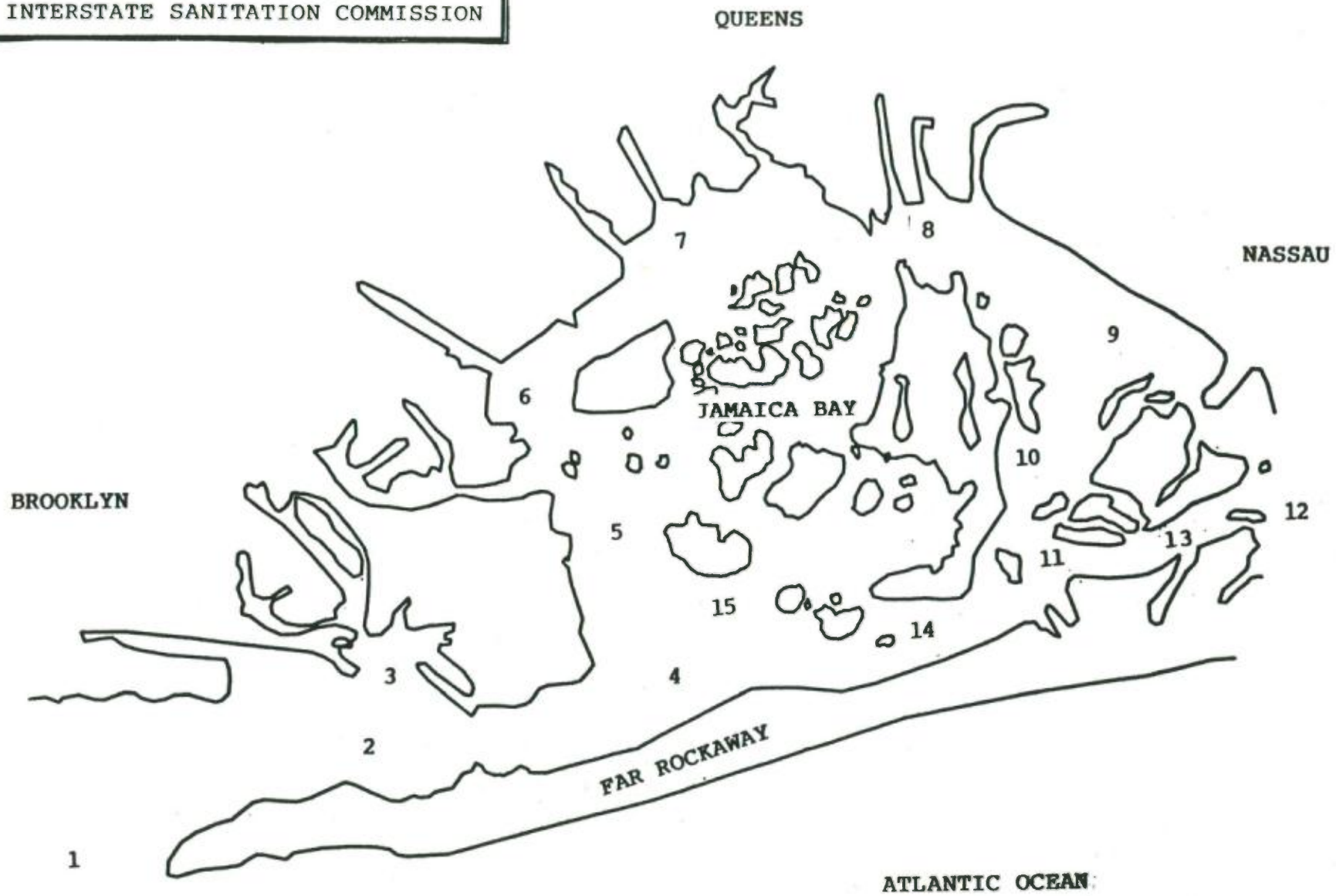
Suffolk County Department of Public Works has four drainage basins in their jurisdiction. A pump station conversion to a 2.5 MGD secondary facility was completed in February, 1989. The plant, located in Suffolk County Sewer District No. 21 (formerly known as SUNY at Stony Brook), had a final cost estimated at \$13 million.

The Westchester County Department of Environmental Facilities has three major ongoing projects in three different drainage basins. The Mamaroneck WPCP is 20% complete; this primary plant is being upgraded and expanded to a 20 MGD secondary activated sludge plant with an estimated final cost of \$135 million. The Port Chester WPCP is being upgraded to secondary treatment at an estimated cost of \$42.5 million; ninety-five percent of the work is completed and operations are expected to begin in January, 1990. The Yonkers drainage basin is conducting CSO elimination and regulator rehabilitation work; this \$6.5 million project is 40% complete.

Department of
National Ocean Service. and Atmospheric Administration (NOAA),

The sampling protocol and analysis procedure was in conformance with Section B of the National Shellfish Sanitation Program (NSSP) Operations Manual (1986); a three tube decimal dilution MPN test was used. A summary of the coliform sampling results are on the following page as well as the National Shellfish Sanitation Program coliform limitations. All fifteen stations sampled throughout Jamaica Bay failed the NSSP coliform

1989 JAMAICA BAY
SAMPLING STATIONS
INTERSTATE SANITATION COMMISSION



1989 JAMAICA BAY SAMPLING SURVEY FOR SHELLFISHING SUITABILITY

INTERSTATE SANITATION COMMISSION

SAMPLING STATION LOCATIONS

STATION	LATITUDE	LONGITUDE	NUMBER	D	M	S	DESCRIPTION
(NORTH)	(NORTH)	(WEST)	D	M	S		
1	40-33-30.6	73-56-48.6	Rockaway Inlet Cong "9"	FI	G	4 sec	
2	40-34-21.0	73-53-59.4	Rockaway Inlet R "20"	FI	R	6 sec	
3	40-34-56.4	73-54-34.8	Gerristen Inlet R "10"	Nun			
4	40-34-49.2	73-52-16.2	Rockaway Inlet GR "N"	IQ			
5	40-35-59.4	73-52-35.4	West of Ruffie Bar R "4"	Nun			
6	40-37-12.0	73-53-35.4	Bergen Beach C "13"				
7	40-38-26.4	73-52-05.4	Hendrix Creek C "23"				
8	40-38-45.6	73-49-49.8	Howard Beach C "33"				
9	40-37-55.8	73-48-00.6	Grassy Bay East of Pier FR 25 ft "C"				
10	40-37-12.0	73-48-36.6	Winhole Channel GC "5"				
11	40-36-27.0	73-47-25.2	Grass Hassock Channel C "19"				
12	40-37-38.4	73-46-00.6	Head of Bay C "27"				
13	40-36-51.6	73-46-42.0	Norton Basin R "20"	Nun			
14	40-35-31.2	73-49-28.8	Beach Channel C "9"				
15	40-35-36.6	73-51-10.8	South of Ruffie Bar R "R"	FI	2.5 sec		

CLIMATOLOGICAL AND TIDAL INFORMATION FOR
JAMAICA BAY SAMPLING SURVEY

<u>DATE</u>	<u>HIGH TIDE AT</u> <u>SANDY HOOK, NJ</u>	<u>RAINFALL AT JFK INT. AIRPORT</u> <u>PREVIOUS 24 hrs/PREVIOUS 48 hrs</u>	
	E.S.T.	(Inches)	
9/13/89	0640	0.00	Trace
9/15/89	0812	1.19	1.19
9/20/89	1222	1.16	1.17
9/21/89	1320	0.52	1.68
9/27/89	0658	0.80	0.87

TIME DIFFERENCES FOR HIGH TIDE IN SAMPLING
AREA vs HIGH TIDE AT SANDY HOOK, N.J.

<u>Place</u>	<u>Position</u>		<u>Time</u>
	<u>Latitude</u> North D/M	<u>Longitude</u> West D/M	<u>Differences</u> Minutes
Plumb Beach Channel	40 35	73 55	+02
Barren Island	40 35	73 53	-01
Beach Channel	40 35	73 49	+37
Motts Basin	40 37	73 46	+39
Norton Point	40 38	73 45	+38
JFK Int. Airport	40 37	73 47	+25
Grassy Bay	40 39	73 50	+43
Canarsie	40 38	73 53	+27
Mill Basin	40 37	73 55	+28

INTERSTATE SANITATION COMMISSION

1989 JAMAICA BAY SAMPLING SURVEY FOR SHELLFISHING SUITABILITY

SUMMARY OF COLIFORM SAMPLING RESULTS

STATION NUMBER	FECAL COLIFORMS (MPN/100 ml)			TOTAL COLIFORMS (MPN/100 ml)		
	MEDIAN	GEOMETRIC MEAN	% OF SAMPLES >300	MEDIAN	GEOMETRIC MEAN	% OF SAMPLES >3300
1	<30	>140	20	230	>320	20
2	2400	1100	80	2400	2000	0
3	430	530	80	2400	1400	0
4	930	490	60	930	1500	20
5	2400	2300	100	>24000	>8600	80
6	>24000	>9200	100	>24000	>13000	80
7	930	>1500	80	2400	>1800	40
8	11000	>8000	100	>24000	>21000	100
9	4600	>4400	100	4600	>4900	60
10	4600	>5300	100	2400	>3900	40
11	2400	1400	80	2400	2200	40
12	>24000	>8600	100	>24000	>9900	80
13	2400	3100	100	11000	4500	60
14	750	760	60	4600	4600	60
15	2400	1300	80	2400	>4300	40

SUMMARY OF TOXICS ANALYZED FOR IN STUDY AREA

PARAMETER	LDL*	PARAMETER	LDL*
Aldrin	0.05	Arsenic	5.0
Alpha -BHC	0.05	Cadmium	0.5
Beta-BHC	0.05	Chromium	1.0
Gama-BHC	0.05	Copper	1.0
Delta-BHC	0.05	Lead	5.0
Clordane	0.10	Mercury	0.2
4,4-DDT	0.05	Nickel	1.0
4,4-DDE	0.05	Zinc	5.0
4,4-DDD	0.05	Indeno-(1,2,3)-C,U)-Pyrene	3.0
Dieldrin	0.02	Naphthalene	2.0
Endosulfan I	0.05	Phenanthrene	2.0
Endosulfan II	0.05	Pyrene	2.0
Endosulfan sulfate	0.05	Acenaphthene	2.0
Acenaphthylene	3.0	Anthracene	2.0
Benzo (A) Anthracene	5.0	Benzo (A) Pyrene	3.0
Benzo (B) Fluoranthene	5.0	Benzo-(G,H,I)-Perlyene	3.0
Benzo (K) Fluranthene	5.0	Chrysene	3.0
Dibenzo-(A,H)-Anthracene	3.0	Fluoranthene	2.0
Endrin	0.05	Fluorene	2.0
Endrin aldehyde	0.10		
Heptachlor	0.05		
Heptachlor epoxide	0.05		
Toxaphene	1.00		
PCB-1016	0.30		
PCB-1221	0.30		
PCB-1232	0.30		
PCB-1242	0.30		
PCB-1248	0.30		
PCB-1254	0.30		
PCB-1260	0.30		

*Lowest detection limit measured in ug/l

SUMMARY OF HEAVY METALS CONCENTRATIONS IN STUDY AREA*

STATION	DEPTH** (feet)	CADMIUM	COPPER	LEAD	MERCURY	ZINC
5	27	19	<1	511	4.72	233
6	43	7	<1	484	4.0	252
7	37	<0.5	258	450	3.62	366
8	17	<0.5	257	453	2.56	279
9	23	<0.5	234	409	2.76	305
12	23	<0.5	<1	452	2.5	322
14	29	29	<1	470	5	294

* Concentrations of total metals in ug/l.

** Sample depth is one foot above the bottom.

Connecticut Harbor Surveys

Many harbors in Connecticut are affected by point and non-point sources of pollution. The full potential uses of these waters has yet to be attained. Until precluded by a drastic budget cut by the Connecticut Legislature that resulted in a staff reduction, the Commission was scheduled to take part in a multi-agency effort to collect the data required by the United States Food and Drug Administration's National Shellfish Sanitation Program. This assessment is necessary in order to keep existing shellfishing areas in Connecticut harbors open and to determine if areas now closed could be opened. The Commission put a high priority on this project in 1989 because of the potential economic losses to the State of Connecticut. It is unfortunate that ISC could not participate because of a lack of funding.

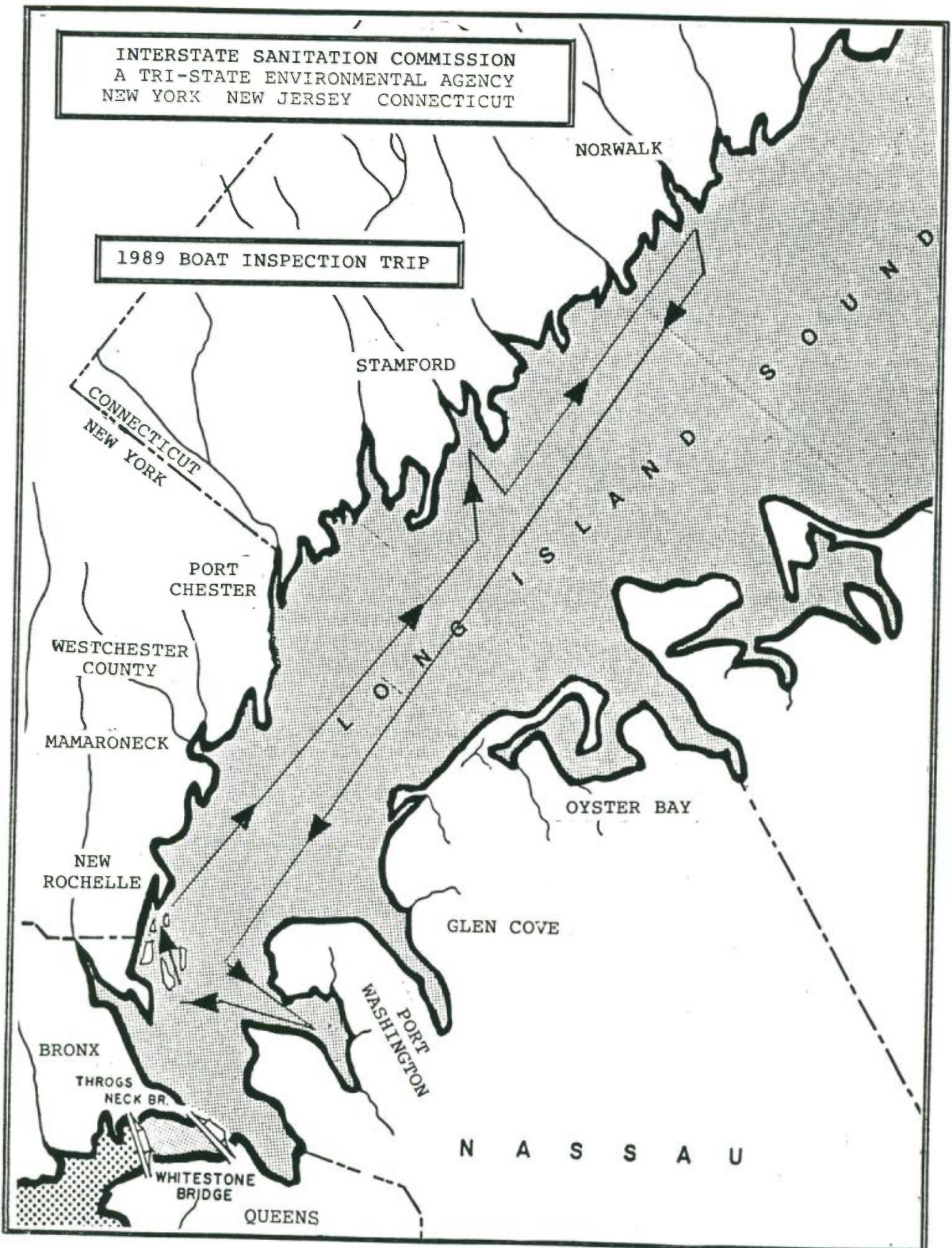
BOAT INSPECTION TRIP

A boat inspection trip was held on July 27, in a portion of the Interstate Sanitation District: Long Island Sound and several of its embayments including Stamford Harbor, Norwalk Harbor, and Manhasset Bay. The map on the following page shows the six-hour route which was traversed. The waters inspected during the trip provide for recreational powerboating and sailing; the use of canoes, kayaks and sculls; and a major sea lane for the eastern seaboard. Other primary contact activities supported by these waters include commercial and recreational fishing, shellfishing, scuba diving, swimming, water skiing, and wind surfing.

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

INTERSTATE SANITATION COMMISSION
A TRI-STATE ENVIRONMENTAL AGENCY
NEW YORK NEW JERSEY CONNECTICUT

1989 BOAT INSPECTION TRIP



NATIONAL ESTUARY PROGRAM

The National Estuary Program was established in 1984 to provide assistance to estuaries of national significance that are threatened by pollution, development or overuse. The Long Island Sound has been receiving funding under this program since 1985. It was officially designated as an estuary of national significance in 1988 and will receive program funding until 1991. The New York-New Jersey Harbor Estuary also received this designation in 1988 and will be funded until 1993. The overall coordination for the Long Island Sound Estuary Study is being carried out by the U.S. EPA Regions I and II. The New York-New Jersey Estuary Program is being coordinated by the U.S. EPA Region II.

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

Long Island Sound Estuary Study

From May 1988 through September 1989, the Commission used automated monitoring equipment to collect data in the East River that is required for the development of the hydrodynamic and water quality models being produced under this program. Hourly readings for temperature, conductivity and dissolved oxygen were recorded and sent to the modelers on floppy disks compatible with the computers being used. During the summer of 1989, the Commission also performed ten transect sampling runs to collect data for use by the modelers to determine the distribution of salinity across the East River at The Battery. The data were collected and analyzed by the Commission using several different methodologies at each transect station and simultaneous readings were taken at Pier 11 on the Manhattan side of the East River, the location of the ISC automated monitor.

The Long Island Sound Estuary Study has recognized toxics contamination as an issue of major concern. Several projects have been funded under this program to shed light on the problem as it exists in Long Island Sound. The studies included gathering all historic data related to toxic pollutants; no new comprehensive data collection efforts were undertaken.

Toxics data was gathered and assessments made for point and nonpoint sources by NOAA; for toxics in the water column by ISC; for toxic contaminant levels in sediments by the National Marine Fisheries Service (NMFS); for biota by Connecticut Department of Environmental Protection; and for fish and shellfish by the NYS DEC. The ISC reviewed and summarized the aforementioned projects and submitted a draft of a report giving an overall characterization of the toxics contamination in Long Island

Sound. The characterization was based on existing data and the report also contained recommendations for future work. The following is a summary of the draft of the toxics characterization report submitted by ISC.

The toxics data available for all media -- the water column, sediments, biota, fish and shellfish, and point and nonpoint sources -- is extremely limited both spatially and temporally. The data base for point and nonpoint sources consists mainly of engineering estimates or "typical" values. This makes the results of any correlations between toxics from point and nonpoint sources and toxics in the other media suspect at best. Because of the data's non-uniformity spatially, temporally and in the methods of collection and analyses, the data do not lend themselves to a computerized analysis. However, some conclusions and recommendations can be made.

The toxic levels in the species and sediments sampled tended to be higher in the western Sound and the harbor and near-harbor areas throughout the Sound. The western Sound is influenced by the discharges from the four New York City sewage treatment plants located in the upper East River. The harbor and near-harbor areas, especially in Connecticut, receive discharges from industrial sources as well as from sewage treatment plants and urban and nonurban runoff. The rivers in Connecticut discharging large volumes of water into the Sound dominate the areas where they discharge.

Steps must be taken to supplement the present toxics data base for Long Island Sound before a comprehensive toxics remediation program can be put in place. A comprehensive, and if possible synoptic, toxics sampling program must be developed for all media. This program must be coordinated among the states, ISC and others conducting sampling in Long Island Sound. The sampling must address health risks to humans as well as to the biota and fish and shellfish found in the Sound. Along with the ambient sampling, the data base for point and nonpoint sources must be enhanced with monitoring data rather than the estimates that are now being used for toxics. It is only after these steps are taken that a meaningful toxics reduction program for the protection of the waters and species of Long Island Sound can be implemented.

New York-New Jersey Harbor Estuary Program

Besides its active role as a member of the Management Committee, the Commission has been participating on the Management Committee and several work groups, such as pathogens and toxics, for a separate but related study, the New York Bight Restoration Plan. As part of the Bight study, the Commission took part in the development of a short-term floatables action

plan that was successfully implemented for the 1989 beach season. ISC is participating in the development of a long-term floatables action plan.

COMBINED SEWER OVERFLOW CONFERENCE

On March 16, 1989 the Commission sponsored a Combined Sewer Overflow Conference. The conference was held at the Oval Room - World Trade Center, compliments of the Port Authority of New York and New Jersey.

Panel discussions addressed state policy, guidelines and regulations as well as local government progress and problems. Officials from federal agencies, all three member states, local municipalities and sewerage authorities, public interest groups and consulting engineers took active roles in the afternoon working sessions. By designating a waterbody per work group, individuals could exchange ideas, learn about other CSO abatement programs and establish lines of communication to prioritize and coordinate efforts on shared waterways.

A follow-up meeting was held among ISC and the environmental departments of its three member states to discuss wet weather effluent requirements for CSOs. This project is in its early stages and further meetings will be scheduled in 1990.

III. AIR POLLUTION

GENERAL

Since the inception of its interstate air pollution program in 1962, the Commission has been active with investigations, applied research, and advocating regional viewpoints on environmental issues. During 1989, the ISC continued its investigation of air pollution complaints, particularly on Staten Island. For the 12-month period ending September 30, 1989, a total of 620 air pollution complaints were received; a decrease of 40% from that of the previous 12-month period.

The Commission continued its coordination of the regional Ozone Health Message System during the past summer. On days when the ISC received information of unhealthy concentrations of ozone from the States of New Jersey and Connecticut, the Commission issued health advisories to the public. The groups of recipients of the health messages were expanded this year to include radio and television stations in addition to the wire services and government environmental and health agencies.

The Regional Air Pollution Warning System, which ISC has coordinated since 1970, operated at a reduced level during the past year because of budget restrictions and the absence of NYS DEC participation.

AIR POLLUTION COMPLAINTS

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

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

For the 12-month period ending September 30, 1989, the Commission received a total of 620 complaints; a decrease of 40 percent compared to the previous 12-month period. The number of complaints for the comparable 12-month periods in 1988, 1987 and 1986 were 1,053; 954; and 3,475; respectively. The complaints were categorized by the Commission into four groups which are presented in the following tables: (1) community from which complaints were made, (2) type of odor, (3) time of day, and (4) day of the week.

Fifty-four Staten Island communities were the source of at least one complaint to the Commission during the October 1988 - September 1989 period. For the fourth consecutive year, the citizens of New Springville reported more odor complaints than those of any other Staten Island community. Sixty-seven complaints were received from New Springville which represented 10.8 % of the total. West New Brighton and Bulls Head were the source of more than 50 complaints each. Only sixteen complaints were registered from the four other boroughs of New York City, Long Island and New Jersey.

Based on the descriptions reported by the citizens, odors were classified into ten categories as shown in the table. The "chemical and others" category was reported most often with 46.3% of the total of all complaints. It should be noted that the "chemical and others" category represents odors that were described as "chemical" as well as odors that could not be more specifically identified by the complainants.

In order to identify when most complaints are made, they 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. The majority of complaints reported, 61.3% of the total, were received during the 8-hour period between 4:00 p.m. and midnight, which followed the pattern of previous years. As the table

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY COMMUNITY ON
STATEN ISLAND FROM OCTOBER 1988 TO SEPTEMBER 1989

COMMUNITY	COMPLAINTS	
	NUMBER	% OF TOTAL
New Springville	67	10.8
West New Brighton	56	9.0
Bulls Head	52	8.4
Travis	40	6.5
Annadale	31	5.0
Great Kills	30	4.8
Arden Heights	28	4.5
Willowbrook	28	4.5
Tottenville	25	4.0
Richmondtown	23	3.7
Eltingville	23	3.7
Graniteville	20	3.2
Westerleigh	19	3.1
Port Richmond	15	2.4
St. George	12	1.9
Mariner's Harbor	12	1.9
Castelton Corners	11	1.8
Huguenot	10	1.6
New Dorp	10	1.6
All Others *	108	17.6
TOTALS	620	100.0

* Represents 35 communities from which 9 or fewer complaints were reported per community. In addition, this total includes sixteen complaints from other New York City boroughs, Long Island and New Jersey.

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY TYPE OF ODOR
 FROM STATEN ISLAND COMMUNITIES
 FROM OCTOBER 1988 TO SEPTEMBER 1989

TYPE OF ODOR	COMPLAINTS	
	NUMBER	% OF TOTAL
Garbage	150	24.2
Gassy	61	9.8
Cat Urine	49	7.9
Sulfur/Eggy	38	6.1
Sewage	16	2.6
Burning Rubber/Plastic	13	2.1
Dead Fish/Fishy	5	0.8
Soap/Detergent	1	0.2
Onion/Garlic	0	0.0
Chemical & Others	287	46.3
TOTALS	620	100.0

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY TIME OF DAY
FROM STATEN ISLAND COMMUNITIES
FROM OCTOBER 1988 TO SEPTEMBER 1989

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 1988	11	11	45	67	10.8
November 1988	7	8	63	78	12.6
December 1988	2	16	65	83	13.4
January 1989	5	14	12	31	5.0
February 1989	6	8	24	38	6.1
March 1989	1	7	13	21	3.4
April 1989	3	12	13	28	4.5
May 1989	7	18	11	36	5.8
June 1989	8	3	14	25	4.0
July 1989	10	24	43	77	12.5
August 1989	10	19	43	72	11.6
September 1989	10	20	34	64	10.3
TOTALS	80	160	380	620	
% OF TOTAL	12.9	25.8	61.3		100.0

* Includes Weekends and Holidays

DISTRIBUTION OF AIR POLLUTION COMPLAINTS BY DAY OF WEEK
 FROM STATEN ISLAND COMMUNITIES
 FROM OCTOBER 1988 TO SEPTEMBER 1989

MONTH	NUMBER OF COMPLAINTS						
	Day of Complaints*						
	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
October 1988	5	5	26	2	11	8	10
November 1988	11	17	5	6	23	1	15
December 1988	1	7	8	44	10	10	3
January 1989	5	7	2	4	7	1	5
February 1989	10	9	6	8	1	3	1
March 1989	3	1	1	3	6	4	3
April 1989	3	4	2	5	7	5	2
May 1989	3	11	11	4	3	4	0
June 1989	1	2	3	5	6	2	6
July 1989	9	19	5	7	11	19	7
August 1989	7	4	13	32	3	5	8
September 1988	7	11	8	15	9	10	4
TOTALS	65	97	90	135	97	72	64
% OF TOTAL	10.5	15.6	14.5	21.9	15.6	11.6	10.3

* Includes Holidays

indicates, odor complaint calls to the Commission were distributed fairly evenly in the months between October, 1988, and September, 1989, with 13.4% of the total made in the peak month of December, 1988. No drop-off in the number of odor complaints was observed as a result of closing the Staten Island field office. Approximately one-third of the total complaints for the 12-month reporting period were received during the three months after the office closure.

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 was highest on Thursdays when 135 calls, or 21.8% of the total, were registered. The lowest number of complaints per day were received on Sundays and Mondays when 10.3% and 10.5%, respectively, were made. Comparisons with patterns exhibited in the past several years indicate that the highest number of odor complaints are made on the mid-week days and the fewest number are placed on Sundays.

OZONE HEALTH MESSAGE SYSTEM

The Ozone Health Message System operated in 1989 for the second consecutive summer to alert the public of unhealthy levels of ozone existing in the atmosphere of the Metropolitan Region. The system was developed as a cooperative, tri-state effort by environmental and health representatives from the Commission; the States of New Jersey, New York and Connecticut; New York City and the U.S. EPA. As a result, a single source of precautionary advice on ozone is provided to the Region during the months from May to September.

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

In mid-May 1988, New York environmental and health departments unexpectedly suspended its participation in this public notification program. Nonetheless, the Ozone Health Message System operated successfully throughout the summer employing ozone pollutant data from New Jersey and Connecticut and meteorological forecasts from New Jersey.

After receiving and coordinating information from the states on ozone concentrations in the atmosphere recorded by continuous monitoring stations, ISC announces to the public, whenever conditions warrant, that elevated levels of ozone are present in the Region. These ozone health messages, or "health advisories", are communicated to the wire services, radio and television stations, and government environmental and health agencies. The individual states also independently issue their own health messages to pinpoint specific regions where ozone readings indicate a special health problem.

During the warm weather months, ozone readings were transmitted by the States of New Jersey and Connecticut to the ISC each weekday on the hour between 11 a.m. and 3 p.m. New York State and New York City continue to choose not to participate in this Regional, interstate, public notification program.

A total of 13 ozone values were received by the Commission that equaled or exceeded the National Ambient Air Quality Standard of 0.12 ppm during the summer of 1989. This data was received from seven monitoring stations in New Jersey and four in

Connecticut. A "health advisory" message, indicating that at least two monitoring stations recorded ozone levels exceeding 0.12 ppm at a particular hour, was transmitted by the ISC on only three days this season. In contrast, high ozone levels in 1988 resulted in the transmission of "health advisory" messages on 16 days.

REGIONAL AIR POLLUTION WARNING SYSTEM

The Interstate Sanitation Commission is the coordinator of the New Jersey-New York-Connecticut Air Quality Control Region's High Air Pollution Alert and Warning System. Based on high pollutant concentrations and/or stagnation advisory reports, the Commission may activate this system. During the past year, conditions did not warrant activation of the system. Because of budget cuts affecting ISC operations in mid-1989, and the absence of NYS DEC participation in the program since May, 1988, the system operated at a reduced level in the latter part of 1989.

IV. LEGAL ACTIVITIES

In 1989 the Commission participated in ongoing and active major cases -- the Township of Woodbridge v. New York City which involves Fresh Kills Landfill, U.S. v. City of Hoboken et.al. which involves five (5) Hudson County, New Jersey municipalities and their sewage treatment plants, and the Brooklyn Navy Yard Resource Recovery Facility Permit Hearing. Additionally, the ISC is now participating in two adjudicatory hearings concerning SPDES permits issued by the New York State Department of Environmental Conservation (NYS DEC). Both of these hearings are important to the ISC because of the water quality issues involved. In the Yonkers Joint Wastewater Treatment plant hearing, the ISC's concern is that the re-rating of a 92 MGD plant to 120 MGD and the lifting of the current moratorium on sewer hookups without resolving the plant's inflow and infiltration (I/I) problem will result in reduced efficiency of treatment at the plant and a correspondent impact on water quality. The other hearing involves the SPDES permits issued to the 14 New York City sewage treatment plant. This consolidated hearing is of major importance to the ISC. Collectively these plants discharge 1.5 billion gallons per day of wastewater into District waters. Of this amount, 771.3 MGD is inadequately treated sewage (less than secondary treatment). Seven of these plants have flows at or over design capacity. Additional flows are being proposed for these plants. New York City is also calculating its monthly treatment plant flows using diurnal dry weather curves rather than the 30 day arithmetic mean of all flows to the plants. Furthermore, the permits do not reference or incorporate ISC water quality regulations.

Because of budget cuts and resultant loss of the ISC's water quality engineer and sanitarians, some enforcement activities, such as the CSO dry weather enforcement program, were temporarily curtailed.

NEW YORK CITY SEWAGE TREATMENT PLANT PERMIT HEARINGS

The ISC brought suit (ISC v. Jorling) in State Supreme Court in Queens County in November, 1988 over the NYS DEC's failure to hold a hearing prior to issuing discharge permits to the 14 sewage treatment plants in the City of New York. In a Judgment 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 -- the Natural Resources Defense Council (NRDC), the Hudson River Fishermen's Association (HRFA) and the Sierra Club -- as well as

NYS DEC, the City of New York and the Environmental Defense Fund (EDF).

The issues on which the ISC plans to present evidence and sponsor witnesses include incorporation of ISC regulations in the permits, the necessity to reduce flows into NYC plants that are over capacity, and the need to address untreated discharges in the District, among other items. A pre-adjudicatory hearing conference was held on September 14, 1989, at which potential parties were heard and issues to be adjudicated were defined. At that hearing, Counsel for the ISC noted that the ISC was ready to present testimony and witnesses on the aforementioned issues and was ready to participate on the issues of toxicity limits, pretreatment and sludge content limitations from a regional perspective.

On September 18, 1989, Andrew S. Pearlstein, the NYS DEC Administrative Law Judge (ALJ), made preliminary rulings granting full party status to the ISC, NRDC, Sierra Club, the HRFA and EDF. The following issues were deemed appropriate for the adjudicatory hearing: (1) toxic effluent standards, (2) industrial pretreatment requirements, (3) untreated discharges, and (4) plant capacity. The ALJ also directed that briefs be submitted on the following issues which were not resolved at the issues conference: (1) incorporation and applicability of ISC regulations, (2) inclusion of sludge content limitation requirements, (3) inclusion of water conservation conditions in the SPDES permits, (4) appropriateness of staggered permit terms and (5) inclusion of denitrification requirements.

Technical conferences were scheduled at the direction of the ALJ. ISC legal and technical staff participated in the four technical conferences held on the issues of capacity, combined sewer overflows and pretreatment in October and November. The hearing itself will not begin until after January, 1990. A ruling on the issues is expected soon.

Yonkers Joint Wastewater Treatment Plant Permit Modification Hearing

ISC petitioned for party status in this NYS DEC administrative hearing on the modification sought for the Yonkers SPDES discharge permit. The proposed permit modification would re-rate the plant from its design flow of 92 MGD to a flow of 120 MGD, with an allowed flow of 145 MGD during the winter months. No construction to augment the plant or operational changes are planned. A determination of the Administrative Law Judge, Andrew S. Pearlstein, on September 1, 1989 granted the ISC full party status. Issues included in the proceedings are the impact of the action on water quality, consideration of alternatives to the

action on water quality, consideration of alternatives to the proposed action, and odor.

The ISC is sponsoring the following witnesses and pre-filed testimony with exhibits:

(1) ISC's Assistant Chief Engineer will use water quality predictions generated using the New York Harbor Model and ambient water quality surveys to demonstrate in his testimony that the proposed re-rating will have a negative impact on the water quality near Yonkers and regionally and that portions of the waters in question are not meeting present requirements, and

(2) A consultant will be testifying on the inadequacy of the Westchester County's unit process analysis based on his own independent assessment, which will be attached as an exhibit to his prefiled direct testimony. The hearing convened at the Yonkers Joint Wastewater Treatment Plant on November 28th. A site inspection was conducted but the hearing was adjourned until December 20 to resolve comments and concerns about the plant re-rating raised by U.S. EPA. Technical meetings on water quality issues were held on December 13, 14, and 20.

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

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

In 1986, the ISC intervened in an action in New Jersey federal District Court initiated by the Township of Woodbridge ten years ago. Approximately 13 Court Orders were issued in the intervening years prior to ISC's cross-motion for contempt in September 1987. As a result of the contempt citation by Judge Maryanne Trump Barry and in order to participate in formulating a solution to the Region's waterborne garbage problems, the parties to the suit entered into a Consent Order that required the City of New York to implement water cleanliness procedures, to install interim remedial equipment (including the superboom), and to hire an independent monitor. The Order also provides for an evaluation by an Independent Consultant of the effectiveness of the interim equipment and procedures and recommendations for alternative long-term measures (such as containerization) by January 1, 1990.

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

The plaintiffs filed motions in September, 1988 requesting the Court to modify the Consent Order. The State of New Jersey requested containerization immediately. The ISC requested the acceleration of the Independent Consultant's Report and the implementation of a long-term alternative more expeditiously. All plaintiffs were in agreement that the variability of the performance of both equipment and personnel at the landfill resulted in a continuing waterborne debris problem. The Judge referred the matter to the Special Master Nicholas Katzenbach. Mr. Katzenbach, after oral argument, an evidentiary hearing, and consideration of proposed findings from the parties issued his Findings of Fact and Conclusions of Law in August, 1989. Mr. Katzenbach made a finding that debris continued to enter the waterways, requested interim actions and found that while as a matter of law the Consent Order could be modified, the parties should wait for the January 1, 1990 report. He also recommended that both the New Jersey Department of Environmental Protection and ISC have continued access to the landfill for monitoring and surveillance purposes.

On September 1, 1989, the parties filed motions confirming the findings of fact of the Special Master Report but each plaintiff made requests for additional relief. The ISC requested an expedited evaluation of the superboom by an independent entity. If the evaluation found that the superboom was not effective at preventing waste from exiting the landfill, interim remedial actions should be removed from consideration as an alternative measure, and only comprehensive changes to the landfill operation be included in the Consent Order II.J. Study by the Independent Consultant due on January 1, 1990.

In September and October, 1989, ISC field staff continued land based inspections and boat surveys of the landfill. Based on these inspections, the ISC is still concerned with the effectiveness of the superboom. However the hearing in this matter did not occur until October 23, 1989. Due to the timing of the hearing and the time required for the appointment of an independent entity to evaluate the superboom, the ISC orally withdrew its request for additional relief at the hearing while indicating its ongoing concern regarding the variability in performance of equipment.

In an oral opinion issued at the hearing on October 23, 1989, Judge Barry confirmed the Report of the Special Master and the modifications to the Consent Order recommended by the Special Master.

The ISC field staff continued landfill inspections and boat surveys in November and December 1989. An evaluation of the superboom by the Independent Consultant was submitted to the parties on December 15, 1989 and the II.J. Study of the

effectiveness of the interim remedial actions and the consideration of long-term comprehensive changes to the landfill (including an enclosed barge unloading facility) is due on January 1, 1990. In both cases, the parties are required to review the studies, submit comments and meet. It is expected that the ISC and the other parties will be before the Special Master regarding this report if the interim remedial actions are recommended by the Consultant.

LITIGATION AGAINST HUDSON COUNTY MUNICIPALITIES

Litigation was initiated 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 federal District Court in New Jersey in 1986. 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 parties involved are the U.S. EPA and ISC, co-plaintiffs, and the major defendants as described below. The Hudson County Utilities Authority, Guttenberg, Weehawken, and Union City are also defendants and the State of New Jersey was a necessary named defendant.

Jersey City

Jersey City was the first municipality to sign a Consent Order with the plaintiffs and began conveying its wastewater to the Passaic Valley Sewerage Commissioners (PVSC) sewage treatment plant under the terms of the Consent Order, although it occurred at a later date than originally planned. The connection was to occur by December 1988 but delays resulted (see Force Majeure in next paragraph) and the Jersey City Sewerage Authority began pumping water from the East Side plant to the PVSC plant on September 27, 1989 and from the West Side plant on September 28th. There was a problem with the pipelines resulting in the flow from the East Side Plant being stopped on September 29, and the plant continued to discharge wastewater. However, the matter has been resolved and the ISC was informed that the East Side Plant was pumping its flow to PVSC plant as of December 7, 1989.

The Jersey City Sewage Authority (JCSA) invoked the Force Majeure provision of its Consent Order by letters dated October 31, 1988, and December 31, 1988, respectively. The defendant JCSA notified the plaintiffs it would not divert its waste to the PVSC sewage treatment plant on December 30, 1988, as required by the Consent Order because of a delay in the laying of its pipeline caused by a collapse of a section of the west bank of

the Passaic River. The delay was attributed to the December 31, 1988 problems in pumping out chromium contaminated water which had collected in a tunnel through which one of the pipelines was being laid. The ISC evaluated the materials submitted by the defendants and on September 27, 1989, issued a Notice of Dispute regarding same. The parties have not met with the defendants and have extended the period for informal negotiations. If the matter is not resolved, stipulated penalties will attach to the period of noncompliance unless the defendants are successful in petitioning the Judge to rule otherwise.

Bayonne

The Consent Order with the City of Bayonne was entered with the court in April, 1989. Due to the presence of chromium contaminated soil along the pipeline routing and a problem regarding a damaged pipe, the City of Bayonne has by letter dated October 23, 1989, made a formal extension request from the December 30, 1989 completion date for its tie-in to the PVSC sewage treatment plant. This request was made pursuant to the Force Majeure provisions of its Consent Order. Bayonne is now subject to stipulated penalties payable to both USEPA and the ISC if its compliance schedule or interim limits for BOD and TSS are violated.

North Bergen

The Consent Order against North Bergen and the North Bergen Municipal Utilities Authority was published in the Federal Register in November 6, 1989, 54 Fed. Reg. 46659. The public comment period ended on December 6, 1989. The Department of Justice will move for entry of the Order soon after. Construction on North Bergen's treatment plant to provide secondary treatment commenced in the spring. The compliance schedule in the Consent Order requires that the facility be upgraded by September 1, 1990, and meet secondary permit limits by December 1, 1990.

West New York

This year, monthly status conferences have been held in federal District Court in New Jersey under the aegis of Magistrate Stanley Chesler with representatives of the West New York defendants. At the March status conference agreement was reached by the parties except for minor issues. In the two months following this meeting, the plaintiffs were notified that certain irregularities in reporting data (including the actual

flow going to the plant) had been discovered. The treatment plant operator and the West New York Municipal Utilities Authority director had departed and records were missing. A federal investigation is pending. Since the plant's actual flow may have been misrepresented, a consultant did flow studies at the plant. A consultant was also engaged to make recommendations for upgrading the plant since the plant is now at capacity.

The proposed compliance schedule had to be revised because of the aforementioned reasons and because a bid protest was filed. ISC attended several meetings to discuss modification of the design to upgrade the facility, with the emphasis on continued progress toward an adequate plant and collection system. It is expected that a Consent Order will be signed in January, 1990.

Hoboken

Monthly status conferences in this matter were also held in federal District Court in New Jersey.

As a condition of continued negotiations, the ISC required the defendant to engage an independent entity to operate its plant in early spring. ISC sanitarians and technical staff had previously inspected and evaluated the plant and met with the parties. Plant treatment at the time was having a negative effect -- that is, the plant effluent contained more pollutants than the plant influent.

The Hoboken-Union City-Weehawken Sewage Authority, a newly created sub-regional authority, awarded a contract to an independent entity to operate the plant. The new plant operators instituted various reforms, replaced equipment and personnel, and the plant is now operating as a primary plant.

The negotiation of a firm compliance schedule for the construction of the upgraded facility was delayed because bid protests were filed in June, 1989 with the HCUA and the decision was appealed to the U.S. EPA. Negotiations toward settlement increased during these last few months. The appeal has been resolved and the HCUA voted to award the liquid train contract. The Consent Order's interim effluent limits for TSS and BOD were the remaining issue to be negotiated at the December 1st meeting. The ISC had evaluated the limits proposed by the defendant and made a counter-proposal which was based on a statistical analysis of data supplied by the defendant to ISC. The ISC was able to negotiate limits significantly lower than those proposed. A final Consent Order will be circulated within the next few weeks.

BROOKLYN NAVY YARD RESOURCE RECOVERY FACILITY PERMIT HEARING

The ISC has been participating in the hearing on the issuance of permits for the proposed resource recovery facility at the Brooklyn Navy Yard for several years, both during the initial hearing and the reopened proceedings earlier this year.

The parties involved are the ISC, NYS DEC, the City of New York, EDF, NRDC, a Citizens Advisory Committee for the area adjacent to the proposed project, New York Public Interest Research Group and the United Jewish Organization of Williamsburg.

In mid-November of 1989, the Commissioner of the NYS DEC issued his decision on the permits for the construction and operation of the resource recovery facility proposed at the Brooklyn Navy Yard. The decision included many permit conditions proposed or supported by the ISC, while withholding ultimate issuance of the permits pending identification of a conforming site for ash disposal. The rejection of the Old Muldoon site at the Fresh Kills Landfill in Staten Island for ash residue disposal and the identification of a conforming site for the ash prior to the issuance of permits to construct and to operate was one of the positions advocated by the ISC. The decision was based on the hearing report submitted by Administrative Law Judge Robert P. O'Connor.

The ISC's main contribution was in the area of water quality. The ISC advocated covered barges and equipment to reduce floatable debris at the site of the facility on Wallabout Channel. As a result of the ISC's position, and the credibility that the ALJ stated that he attached to the ISC's position, the permit granted would require a net on the bottom of the door of the enclosure and installation of a boom in the channel with an attached 15-foot net. Also resulting from ISC issues were the requirement of a skimmer boat and a small utility boat, covered refuse barges, and barge deck and bulkhead cleaning procedures.

In the area of cumulative impacts, another major issue raised by the ISC, although the ALJ agreed that such an assessment was important, he declined to require an assessment for issuance of this permit, but indicated that for subsequent proposed facilities, the City should conduct such an assessment.

Relating to air quality in general, the ISC largely supported the Environmental Defense Fund, rejecting a shorter time frame before final emission standards were to be imposed, a position rejected by the ALJ in favor of NYS DEC's longer time period.

WASTEWATER TREATMENT PLANTS
DISCHARGING INTO
INTERSTATE SANITATION DISTRICT WATERS
1 9 8 9

Plant	ISC Receiving Water Classification	Date of Const.	Flow MGD		Type of Treatment	Estimated Population Served
			Average	Design		
<u>NEW YORK</u>						
<u>Nassau County</u>						
Bay Park	A	1989+	57.8	70.0	Secondary (AS)	510,000
Belgrave Sewer District	A	1988+	1.4	2.0	Secondary (TF)	12,000
Cedar Creek	A	1988+	52.0	56.0	Secondary (AS)	450,000
Cedarhurst	A	1968+	0.9	1.0	Secondary (TF)	7,500
Cold Spring Harbor Laboratory*	A	1975	0.038	0.075	Physical/Chemical	250 - 400
Glen Cove	A	1981+	5.1	8.0	Secondary (AS)	28,000
Great Neck Sewer District	A	1976+	2.5	2.7	Secondary (TF)	13,000
Great Neck Village	A	1988+	0.88	1.5	Secondary (TF)	9,000
Inwood	A	1989+	1.2	2.5	Secondary (TF)	11,000
Jones Beach	A	1985+	0.08	2.5	Secondary (TF)	Seasonal
Lawrence	A	1966+	1.4	1.5	Secondary (TF)	6,000
Long Beach	A	1989+	6.1	6.4	Secondary (TF)	40,000
Oyster Bay Sewer District	A	1963+	1.4	1.2	Secondary (TF)	8,500
Port Washington Sewer District	A	1969+	3.4	3.0	Secondary (TF)	30,000
West Long Beach Sewer District	A	1986+	0.8	1.5	Secondary (TF)	4,000
<u>New York City</u>						
<u>Bronx County</u>						
Hunts Point	B-1	1978+	142.8	200.0	Secondary (AS)	895,000
<u>Kings County (Brooklyn)</u>						
Coney Island	A	1958+	99.3	100.0	Secondary (AS)	690,000
Newtown Creek	B-1	1967	322.9	310.0	Secondary (AS)	1,100,000
Owls Head	B-1	1952	111.7	160.0	Secondary (AS)	785,000
Red Hook	B-1	1987	40.3	60.0	Secondary (AS)	262,000
26th Ward	A	1975+	55.7	85.0	Secondary (AS)	301,000
<u>New York County (Manhattan)</u>						
North River	B-1	1986	168.1	170.0	Secondary (AS)***	1,162,000
Wards Island	B-1	1978+	327.3	250.0	Secondary (AS)	1,300,000
<u>Queens County</u>						
Bowery Bay	B-1	1978+	146.9	150.0	Secondary (AS)	712,000
Jamaica	A	1977+	97.3	100.0	Secondary (AS)	585,000
Rockaway	A	1978+	26.8	45.0	Secondary (AS)	72,000
Tallman Island	B-1	1979+	62.7	80.0	Secondary (AS)	465,000
<u>Richmond County (Staten Island)</u>						
Arthur Kill Correctional Facility*	B-2	1969	0.023	0.1	Secondary (AS)	1,000
Elmwood Park Condominiums*	B-2	1974	-	2.5	Secondary (RD)	1,800
IS-7*	A	1964	0.08	0.13	Extended Aeration w/ Sand Filtration	1,000
Mount Loretto Home - Plant #1*	A	1962	-	-	Septic Tank	250
- Plant #2*	A	1962	-	-	Septic Tank	250
Oakwood Beach	A	1979+	34.1	40.0	Secondary (AS)	286,000
Port Richmond	B-2	1979+	39.3	60.0	Secondary (AS)	210,000
PS-3*	A	1969	-	0.004	Extended Aeration	580
Richmond Memorial Hospital*	A	1985+	0.031	0.04	Secondary (AS)	750
Saint Joseph's School*	A	1963	-	0.02	Septic Tank with Sand Filtration	1,000
Village Green*	B-2	1970	0.46	1.0	Extended Aeration	5,000
<u>Rockland County</u>						
Joint Regional Sewerage Board-Town of Haverstraw	A	1980+	5.4	8.0	Secondary (AS)	50,000
Orange & Rockland Utilities*	A	1984+	0.005	0.012	Secondary (AS)	Industrial
Orangetown Sewer District	A	1968+	8.9	8.5	Secondary (TF)	50,000

WASTEWATER TREATMENT PLANTS
DISCHARGING INTO
INTERSTATE SANITATION DISTRICT WATERS
1 9 8 9

<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>NEW YORK (Continued)</u>						
<u>Rockland County (Continued)</u>						
Palisades Interstate Park						
Bear Mountain Plant	A	1967+	0.14	0.25	Secondary (TF)	Seasonal
Tallman Mountain Plant	A	1968	-	0.01	Secondary (AS)	Seasonal
Rockland County Sewer District #1	A	1989+	18.4	26.0	Secondary (RD)	180,000
Stony Point	A	1985+	0.9	1.0	Secondary (AS)	10,000
<u>Suffolk County</u>						
Huntington Sewer District	A	1988+	2.0	2.5	Secondary (RD)	15,000
Northport	A	1973+	0.3	0.3	Secondary (AS)	3,500
Suffolk County Sewer District #1	A	1988+	1.4	2.5	Secondary (RD)	12,000
Suffolk County Sewer District #3	A	1989+	22.1	30.0	Secondary (AS)	200,000
Suffolk County Sewer District #6	A	1973+	0.7	2.0	Secondary (AS)	10,000
Suffolk County Sewer District #21	A	1989	1.7	2.5	Secondary (BO)	20,000
<u>Westchester County</u>						
Blind Brook (Rye)	A	1985+	3.1	5.0	Secondary (AS)	25,500
Buchanan	A	1962	0.2	0.50	Secondary (AS)	2,000
Kings Ferry Sewer Association*	A	1971	0.035	0.05	Secondary (AS)	600
Mamaroneck	A	1965+	17.6	18.0	Primary	80,000
Metro North (Harmon Shop)*	A	1984+	0.12	0.40	Physical/Chemical	Industrial
New Rochelle	A	1982+	15.7	13.6	Secondary (AS)	80,000
Ossining	A	1981	5.1	7.0	Secondary (AS)	49,000
Peekskill	A	1980+	5.8	10.0	Secondary (AS)	35,000
Port Chester	B-1	1985+	4.7	6.0	Primary	26,000
Springvale Apartments Company*	A	1957	-	0.1	Secondary (TF)	1,000
Yonkers Joint Treatment	A	1988+	97.9	92.0	Secondary (AS)	500,000
<u>FEDERAL & MILITARY</u>						
Camp Smith - (Westchester Co.)	A	1985+	0.09	0.24	Secondary (TF)	2,000
FDR Veterans Administration Medical Center (Westchester Co.)	A	1982+	0.18	0.4	Secondary (TF)	3,000
Gateway National Recreation Area (Floyd Bennett Field, Kings Co.)	A	1981+	0.12	0.4	Secondary (TF)	2,000
Military Ocean Terminal (Hudson Co.)	B-1	1982+	0.14	0.18	Secondary (AS)	3,000

- NOTES:
- + Year of major additions or reconstruction
 - * Private or institutional sewage treatment plant
 - ** Under construction
 - *** Presently providing primary treatment and disinfection; secondary treatment in 1990
 - **** Flow was diverted to a secondary treatment plant in 1989
 - (AS) Activated Sludge
 - (BO) Biochemical Oxidation
 - (RD) Rotating Disc
 - (TF) Trickling Filter

11,325,630

INTERSTATE SANITATION COMMISSION
FINANCIAL STATEMENT FY 1989

The Commission's accounting records are maintained on a cash basis and are audited annually by each of the participating States on a triennial basis. The following is a statement of cash receipts and disbursements for fiscal year July 1, 1988 to June 30, 1989:

CASH BOOK BALANCE AS OF JUNE 30, 1988 -----\$ 169,285.55

RECEIPTS

Connecticut - FY '89	\$ 76,000.00
New York - FY '89	455,100.00
New York - FY '90	78,750.00
New Jersey - FY '89	434,536.00
EPA - FY '88	47,800.00
EPA - FY '89	169,200.00
Long Island Sound Study - FY '87	16,000.00
Long Island Sound Study - FY '88	54,255.00
Interest	15,117.28
Miscellaneous Receipts	<u>1,448.15</u>

TOTAL RECEIPTS 1,348,206.43

Sub-Total \$1,517,491.98

DISBURSEMENTS

TOTAL DISBURSEMENTS 1,226,745.52

CASH BOOK BALANCE ON June 30, 1989 \$ 290,746.46
=====

Checking Account	\$ 7,732.55
Insured Money Market Account	<u>283,013.91</u>
	<u>\$290,746.46</u> =====

G L O S S A R Y

ALJ	administrative law judge
BOD	biochemical oxygen demand
CSO	combined sewer overflow
DEC	Department of Environmental Conservation
EDF	Environmental Defense Fund
EPA	Environmental Protection Agency
FDA	Food and Drug Administration
HRFA	Hudson River Fisherman's Association
I/I	infiltration/inflow
ISC	Interstate Sanitation Commission
JCSA	Jersey City Sewage Authority
LDL	lowest detection limit
MCUA	Middlesex County Utilities Authority
MGD	million gallons per day
ml	milliliter
MPN	most probable number
MUA	Municipal Utilities Authority
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NRDC	Natural Resources Defense Council
NSSP	National Shellfish Sanitation Program
NYC	New York City
NYPIRG	New York Public Interest Research Group
NYS	New York State
PAH	polyaromatic hydrocarbons
PCB	polychlorinated biphenyls
ppm	parts per million
PVSC	Passaic Valley Sewerage Commissioners
R/V	research vessel
SPDES	State Pollutant Discharge Elimination System
SUNY	State University of New York
TSS	total suspended solids
ug/l	micrograms per liter
WPCP	water pollution control plant
>	greater than
<	less than