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THIRD ANNUAL REPORT

1973

SUFFOLK COUNTY

DEPARTMENT OF ENVIRONMENTAL CONTROL

JOHN M. FLYNN, P.E.
COMMISSIONER

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I INTRODUCTION

Total staffing increased from 102 to 125 personnel in 1973 including 11 Public Employment Program (PEP) employees. (Appendix A) Nine of the new employees filled administrative positions, six were engineers and thirteen filled technical positions. Nine of the new hires were transfers from other County Departments. Twelve personnel were promoted, six resigned and sixteen new titles were added. Five former P.E.P. personnel achieved regular positions within the Department.

Department sponsored capital programs grew to \$677 million, comprising a total of 34 projects. (Appendix B) Twenty-six of these involve Sanitary Sewer Programs, seven are Water Supply Projects and one is in the Solid Waste Disposal field. Two new projects were added: The South Fork Water Resources Study and a Study on the Effects on Pollution of the Ground Water due to Agricultural and Turf Fertilization.

Southwest Sewer District construction proceeded at a high level with a total of nine projects under construction during the year. (Appendix C) Bids were received on five new projects, construction started on four, and three were completed during the year.

State Aid in support of environmental monitoring activities increased to over \$392,000. In addition, a Federal Grant for Air Pollution Control work was received in the amount of \$83,000. This assistance supported approximately 46% of total operating expenses for the Department. In addition, sewer district operation and maintenance revenues in the amount of \$13,738 for Port Jefferson and \$3,116 for Holbrook were received thereby reducing the cost to the District taxpayers.

More than 200 miles of sanitary sewer lines were installed throughout the County under Department certification and inspection, and 3.2 million gallons of additional sewage treatment capacity were constructed. A new County-operated sewage treatment facility commenced operation at the Hauppauge County Center with a 288,000 GPD design capacity providing complete nitrogen removal treatment of the present 70,000 GPD daily flow.

The year 1973 also witnessed the completion and operational start-up of the Chemical Laboratory for analysis of fresh water, marine and wastewater sampling programs. Air Pollution Control efforts were directed toward increasing public awareness of the need to maintain high levels of burner operating efficiencies, and industrial air pollution reviews resulted in the installation of \$6.2 million of control devices. Enforcement activities succeeded in obtaining 14 consent orders, and \$8,500 of fines were levied.

In cooperation with the Department of Labor, the Department sponsored a summer environmental program engaging approximately 105 high school students in a variety of clean-up, inspection and wetland monitoring activities. Staff members prepared a number of scientific reports analyzing Long Island's ground water and meteorological conditions. Proposed legislation was prepared dealing with a ban on disposable beverage containers, as well as a comprehensive Environmental Protection Law and Enforcement Code. A policy statement was also issued concerning procedures for the storage of road salt in an effort to prevent ground water contamination from this source.

Statistical year-to-year comparisons reveal significant increases in all areas of program effectiveness (Appendix D). Environmental monitoring results in terms of reduced complaints and violations are attributable to the effectiveness of the increased field inspection programs, where potential sources are being discovered and remedied before violations and complaints can result. Engineering design reviews performed rose significantly, especially in the area of industrial waste. Similarly, construction inspections rose sharply especially in the number of house connections.

On the pages which follow, some of the more significant program results are outlined for each operating section. Only the most cursory review is provided, but hopefully lends to an appreciation of some of the general directions of Departmental activities during the past year.

II OPERATIONS DIVISION

A. PORT JEFFERSON - SEWER DISTRICT NO. 1

Construction began on the interim improvements to the treatment facility, which include an additional clarifier, additional chlorination equipment, a new outfall, and major improvements to the No. 1 sewage pumping station. These improvements will allow the District to maintain present treatment efficiencies as the flow increases from the State University.

In addition, a contract was let for cleaning, T.V. inspection and chemical grouting of selected sewer lines to control ground water infiltration. Elimination of excess infiltration will reduce total plant flow, and thereby reduce power and chemical operating costs for the District.

Another cost saving innovation has been the acquisition of a mechanical, gravity-type, sludge dewatering unit. By removing most of the water from the sludge prior to ultimate disposal, significant sludge haulage cost savings are anticipated.

B. HOLBROOK - SEWER DISTRICT NO. 2

Approximately 50 additional homes were connected to this facility in 1973. A major upgrading of its capabilities is scheduled, including the addition of nitrogen removal facilities, which will begin in late 1974 or early 1975.

C. HAUPPAUGE COUNTY CENTER TREATMENT FACILITY

Placed into full service in May, 1973, this facility is the first full scale, suspended growth, nitrogen removal system on Long Island. Sophisticated laboratory and process control equipment has been installed to evaluate the complex nitrogen removal process. Several modifications have been made to the plant system in order to optimize process efficiency and develop guidelines for use by other treatment plants.

III ENGINEERING DIVISION

A. REALTY SUBDIVISIONS

Maps were prepared for three new sewer districts which are to be created: Birchwood North Shore, Kings Park, and Strathmore Ridge. New subdivisions prepared for Sewer Agency approval totaled 69 comprising 8,112 lots/units.

B. PLANNING

Engineering reports were prepared for each of the proposed new sewer districts above. Plans were also prepared for a 1,875 acre area drainage basin tributary to the main pumping station at the Port Jefferson Treatment Plant; the siting of a treatment facility for the proposed Disposal District No. 2; and the West Hampton Beach Sewer District. This included compilation of data on population, housing, zoning, sewer sizing and routing and total estimated flows.

Procedures and techniques were developed to adopt the current computer review program to actually design a sewer system using only a minimum of input data. This will greatly speed trial sewer district formations.

A report was compiled in response to the U.S.E.P.A. 1973 Survey of Needs for Municipal Wastewater Treatment Facilities. A total projected cost of \$2.4 billion was estimated for 22 existing or proposed County Sewer Districts.

Five feasibility studies were undertaken as follows:

1. Artist Lake - Analysis of this 2,350 acre area resulted in its proposed incorporation into the Yaphank Sewer District.

2. Scavenger Waste Study - Analyzed the suitability of a County-owned and operated scavenger waste facility to be located on the east end of the County. The intent is to eliminate the present practice of scavenger waste disposal into open lagoons.

3. Yaphank Sewer District - Developed maps, plans and an engineering report for the formation of a proposed district encompassing approximately 85 square miles in Central Brookhaven. The district would serve a population of 85,000 with an intercepting sewer network, treatment plant and ground water recharge facilities, thereby eliminating a proliferation of small, subdivision-size treatment plants.

4. San Remo Collection District - This study resulted from a reexamination of a 1972 study. A reduction from 41,000 to 39,000 lineal feet of sewers was made possible by this review.

5. Selden-Coram Study - A 1972 sewer feasibility study was expanded to encompass 31,000 acres, a tripling of the initial study area due to large anticipated population increases. A site was selected for a 15 MGD plant to serve the area.

C. DESIGN

Southwest Sewer District

Water Pollution Control Plant

Finalized reviews were completed on construction techniques, electrical and structural appurtenances, and replies to regulatory agency comments.

Outfall

Final determination was made on the alignment, diffuser orientation, diameter (72"), and offshore length (3 1/2 miles); the design phase project report and backup data were submitted to the EPA and N.Y.S.D.E.C.; final agreement on a contractor staging site (7 acres) was reached; and a variety of investigative meetings were held on navigation, anchorage, easement and structural integrity considerations.

Sewers

Six contracts were reviewed for hydraulics, route alignment, and cut ranges representing 563,835 lineal feet of line. A total of 15 computer runs were made on interceptor and lateral sewer designs.

Other Sewer Systems

An evaluation of the existing Port Jefferson collection system has been initiated in preparation for the in-house design of relief sewers for this aging system. Initial review of the Yaphank County Center Water Pollution Control Plant also commenced in December of 1973. Due to high nitrogen concentrations, unique process systems will have to be installed in this plant to meet nitrogen removal standards.

As shown in Appendix D, an additional 41 County projects and 50 Regulatory projects were reviewed by the Design Section. These include engineering reports, pump stations, collection systems, force mains and treatment plants for a variety of subdivisions, condominiums, nursing homes, hospitals and industrial parks. The backlog of active projects was significantly reduced with 39 being carried into 1974.

Industrial Waste

Guidelines were prepared for the preparation and presentation of designs for the treatment of industrial waste projects and disseminated to contractors. A total of 54 projects were reviewed, and 12 were approved.

Miscellaneous Reviews

The Holbrook Pilot Plant was designed in-house for nitrogen removal capability using rotating discs for nitrification and denitrification. This project has demonstrated the feasibility of removing total nitrogen, and experience gained from its operation will be used to upgrade other treatment systems.

Surveying

Established in the summer of 1973, the survey crew has completed compilation of "as-built" elevations on contract 1001, and determined the elevations of monitoring well heads on 35 wells.

D. SOLID WASTE

The major event in this area during 1973 was the organizing of the Multi-Town Solid Waste Management Corporation/Babylon-Huntington-Islip. The first stage of this plan, preliminary engineering, has been completed.

D. SOLID WASTE (cont'd.)

Routine monitoring work continued on the three incinerators and 15 landfill sites located in the County. Continuous studies have kept abreast of the latest technological developments in the field, especially the water wall, stream generating incinerators promising resource recovery by thermal reduction. Finally, investigations and reports are continually prepared on the availability and suitability of surplus lands.

IV CONSTRUCTION DIVISION

In the Southwest Sewer District, five additional contracts went to bid in 1973, while three projects which started in 1972 were completed. A total of 85 miles of main line sewers, 34 miles of house connections, and 1,660 manholes were inspected by the field personnel.

Other municipal work performed included 78 house connections in the Port Jefferson Sewer District, inspection of 3 sewage treatment plants (Holbrook Pilot Plant, Hauppauge S.T.P. and I.R.S. Complex); and inspection of 2 collection systems (Centerport S.D. and Hauppauge S.T.P.).

A total of 243 projects were inspected by the Construction Division during 1973, an increase of 38% over 1972. Of this total, 167 projects were completed and 76 remain active. Of the \$62.1 million in construction projects undertaken, \$21.4 million were completed of which, the Southwest Sewer District represented \$12.8 million. Pertinent statistical data on the completed projects is as follows:

	Completed Projects	--Total Main	Footage--- House Conn.	Manholes	STP Cap(MGD)
Subdivisions	48	162,074	132,071	603	.546
Gdn. Apts. & Condomins.	17	62,478	32,250	325	1.561
Municipal-Tot.	86	454,683	184,129	1,679	.741
S.W.S.D.	3	449,380	178,402	1,660	-0-
House Connecs.	78	-	-	-	-
Other	16	54,656		230	.306
1973 Totals	167	733,891	391,199	2,837	3.154
1972 Totals	91	472,402	281,635	1,993	.922
Increase	+76	+261,489	+109,564	+ 844	+2.232

House connections accounted for approximately 53% of the total footage installed. One hundred forty-three of the completed projects represented collection systems, while 24 were plant facilities with a total treatment capacity of 3.154 MGD.

V ENVIRONMENTAL MONITORING DIVISION

A. FRESH WATER RESOURCES

Stream Monitoring - Forty-five of the County's seventy-one streams have now been surveyed representing an 82% completion rate for streams in the five western townships. Sampling and gauging of these streams is performed on a scheduled basis from 118 designated sampling points. Historical data from the U.S.G.S. and Health Department has been tabulated and added to the data base. In 1973, an additional 187 samples from these streams were collected, analyzed and compiled.

Well Monitoring - Ninety-three additional wells were installed bringing the total to date to 129. The Town of Shelter Island has appropriated \$10,000 for expanded exploratory drilling to determine its fresh water resources. A specially designed truck, equipped with a submersible pump, has gone into operation to permit routine sampling of the expanding well network.

Data Storage - A storage and retrieval system became operational in 1973 to permit ready access to data compiled on 80 wells and 40 chemical analyses.

Complaints - Most of the 65 complaints received related to flooding caused by the rise of the ground water table in late spring and early summer.

Lawn & Garden Fertilizer Study - Analysis of results from two growing seasons has not revealed any change in ground water quality resulting from fertilizers.

Leachate - U.S.G.S. studies at two landfill sites have revealed two interesting facts. The first is that clays act as confining areas and prevent leachate from moving vertically. The second is that leachate materials seek a confining area before moving downgrade with the ground water. A second study has begun to document the topographical and hydrogeological characteristics of all remaining solid waste disposal sites.

Highway Runoff - Four test wells were installed in a recharge basin off Sunrise Highway to permit sampling and analysis of storm water runoff effects on ground water quality.

Sewage Treatment Plant Wells - Fifteen wells have been installed at new sewage treatment plants to measure potential ground water effects.

Recharge - The first stage, recharge of secondary effluent by basins, has been completed and plans are in progress for facilities to recharge denitrified and ozonated effluents.

Carll's River - A prelude to a large scale stream augmentation program, the basic design criteria for it have been completed, and test wells and equipment to measure in-stream permeabilities will be installed.

Southwest Sewer District - A digital model of the area has now been completed in an effort to determine the effects of sewerage on overall regional water drawdown levels and locations.

Summer Neighborhood Youth Corp. Program - Under Labor Department sponsorship, teams of high school students succeeded in cleaning up 19 streams and 18 ponds; performed a random survey of homeowner use of washday products; surveyed 322 County recharge basins and cleaned 22 of them; and performed a series of water level readings at County and U.S.G.S. wells.

Publications - The following papers were prepared and are available from the Fresh Water Resources Section:

1. Nitrates in Our Ground Water
2. Comments on USGS Paper, "Nitrogen Content of Ground Water in Kings County, Long Island, N.Y.
3. Status of the Ground Water Table in Suffolk County, N.Y. - April, 1973
4. Water Quality of the Upper Ground Water in the Southwest Sewer District
5. Meteorological Implications of Long Island Sound on the Climate of Long Island

B. AIR POLLUTION CONTROL

Open Burning - In addition to the requirement for burning permits, builders have been required to conserve all hardwood trees for use as cordwood.

Emergency Episode Plan - Six air pollution alerts were called, none of which required full implementation of plans developed to permit a complete rollback of pollutant sources during adverse meteorological conditions.

Gasoline Storage - A comprehensive survey of all facilities was made, and a schedule developed for the installation of vapor control devices.

Home Heating Survey - Four hundred ninety-two additional homes were surveyed in 1973 and found average home heating efficiencies of approximately 70%. Lectures were conducted in cooperation with the Oil Heat Institute to improve maintenance and operation efficiencies thereby reducing pollution and conserving fuel oil.

Air Diffusion Analysis - As a result of a digital computer program developed by the Department, the State University of New York at Stony Brook was convinced of the need to install air monitoring sensors within their power plant ventilation system and increase its stack height from approximately 60 to 100 feet to obtain better dispersion.

Noise Control - In response to complaints, the Department recommended the installation of some \$300,000 of attenuation equipment at the I.R.S. complex in Holtsville.

C. ENFORCEMENT

Complaints - Compliance pressures upon laundromat operators succeeded in dramatically lowering complaints from this source. Odor complaints from sewage treatment plants persisted, but overall, total complaints dropped from 1972 levels.

S.T.P. Operations - Seventeen new treatment facilities became operational raising the County total to seventy-eight. Twenty-two more facilities were issued State permits, increasing this total to 56.

Forty-two operator licenses were processed, almost double the 1972 figure. Many of these were from duck farm operators for whom a special operators course was held this year - the first of its kind.

Industrial Waste Control - A survey of 27 hospitals revealed improper disposal procedures for xray solutions. There are now 349 industries being inspected on a regular basis; 126 of these require discharge permits, but only 36 have them. Of the 104 laundromats, 26 have some form of treatment process and are routinely inspected. Preliminary engineering reports have been received from 14 of the County's 27 duck farms; 5 cases are being prosecuted for noncompliance.

Road Salt Storage - A policy has been promulgated requiring immediate coverage of salt piles and storage within a permanent structure by September 1, 1974 in an effort to halt ground water contamination from this source.

D. MARINE RESOURCES

Shoreline Monitoring - Thirty-seven Corps. of Engineer applications were reviewed, seven of which were found objectionable due to potential degradation of the marine environment. Seven dredging proposals were also reviewed, and several reports on their impact were made to the Council on Environmental Quality.

Hazardous Materials - Oil transfer facilities have been categorized, and volume and useage have been tabulated for each in an effort to pinpoint major problem areas. Of the 53 spills reported in 1973, the greatest volume resulted from unloading at bulk terminals, while the greatest incidence of spills resulted from storm runoff of onshore spills into marine waters.

Wetlands - The summer Youth Corps. teams continued their survey of growth patterns and productivities of wetland vegetation. A transplant program was also undertaken to measure growth rates of various relocated species as an indicator for the feasibility of artificial wetlands.

Marina & Watercraft Waste Disposal - A total of 212 marinas were inspected and data compiled on their facilities.

VI STAFF

A. CHEMICAL LAB

During 1973, the laboratory was built, equipped, supplied and put into operation. By November, the analysis work previously performed by the Health Department was being performed entirely in-house. A capability to analyze 29 different parameters existed as of December, with approximately 6 or 7 more to be added to meet full department requirements. A total of 327 samples were analyzed for 1,875 parameters during the operational part of 1973.

B. SPECIAL SERVICES

The major activities of the section consisted of specialized studies in support of other departmental programs. The most notable of these have been: (1) hydrologic investigations and support of the fresh water monitoring well program; (2) detailed analysis of potential air pollution problems from proposed sources; (3) initial drafting of two proposed pieces of environmental legislation - one to control throw-away beverage containers, the other a comprehensive environmental protection law; and (4) an interdisciplinary experimental study of natural recharge rates on Long Island.

B. SPECIAL SERVICES (cont'd.)

Hydrogeologic studies to locate and drill test wells included the preparation of geologic cross sections, well site selection, depth determinations and sampling. In support of artificial recharge planning, analysis was performed of the recovery rates of streamflows and the water table levels vs. precipitation. The water budget verification study was assisted by the selection of soil moisture tubes to measure the evaporative loss from soils and vegetation.

Meteorological studies concentrated on the effects of gas turbine generating facilities as a substitute for the tall stacks and cooling water requirements of conventional steam plants. The less restrictive siting requirement of a gas turbine plant has resulted in an intensive analysis of exhaust plume effects due to their less isolated locations.

Proposed environmental legislation on beverage containers has undergone periodic reassessment in light of social, economic and political complexities experienced by other states. A well defined set of options has resulted and awaits implementation. Similarly, the comprehensive Environmental Protection Law and companion Code are being subjected to close legal scrutiny in preparation for a final draft.

On the Water Budget Verification Study, an experimental site has been selected for the siting of meteorological and hydrogeological equipment, and bids for construction and installation of the necessary instrumentation have been released.

C. RIGHT OF WAY

Fifty nine easements through private property were secured in four contract areas during 1973, compared to 25 secured in 1972. This work involves the review of appraisals, title reports, interviews with owners to obtain settlement agreements, preparation of affidavits of title and final contract documents. In addition, this staff also reviews bids on all sewer district construction work, certifies insurance, prepares the contract and approves final payments for work completed on behalf of the Department. These functions serve to ensure a smooth right of way for construction crews, thereby preventing any delays in construction schedules. An anticipated 100 easements will be required in 1974.

APPENDIX A

1973 PERSONNEL STATUS

	<u>GRADE</u>	<u>E.E.A.</u>	<u>NEW HIRES</u>	<u>PROMOTION</u>	<u>RESIGNATION</u>	<u>TOTAL</u>
<u>MANAGEMENT</u>						
Commissioner	E					1
Deputy Commissioner	D					1
Chief Engineer*	D			1		1
Dir. of Admin. Services	C					1
Asst. to Commissioner	A					1
Subtotal		<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>5</u>
<u>ADMINISTRATIVE</u>						
Prin. Accountant	29					1
Pub. Relations Dir.	28					1
Sr. Budget Analyst*	24		1			1
Accountant	20	1				1
Comm. Relations Asst.*	17		1			1
Secretarial Asst.	16					1
Sr. Account Clerk	13					2
Prin. Stenographer*	13		1			1
Legal Stenographer	10					1
Sr. Stenographer	9			2		4
Sr. Clerk Typist*	9			1		1
Account Clerk	9		1			1
Stenographer	6	1	2		1	9
Switchboard Opr.	6					1
Key Punch Opr.*	6					0
Clerk Typist	5		3		2	3
Subtotal		<u>2</u>	<u>9</u>	<u>3</u>	<u>3</u>	<u>29</u>
<u>ENGINEERING</u>						
Prin. San. Engr.	34					0
Asso. San. Engr.	32					6
Asso. Civil Engr.	32					2
Sr. San. Engr.	29		1	1		7
Sr. Civil Engr.*	29		1			1
Electrical Engr.	29					1
Asst. San. Engr.	23		1	1		10
Asst. Civil Engr.	23		2			7
Asst. Mechanical Engr.	23					1
Asst. San. Engr. (T)*	19		1			1
Subtotal		<u>0</u>	<u>6</u>	<u>2</u>	<u>0</u>	<u>36</u>
<u>TECHNICAL</u>						
Sr. Appraisal Reviewer	31					0
Environmental Physicist	31					1
Meteorologist	29					1
Hydrogeologist*	29				1	0
Lab Director*	28					1
Environmentalist IV*	26			1		1
Map & Coordinate Supr.	25					1
Engr. Technician*	23		2	2		6
Sew. Plnt. Ops. Supr.	23					1
Environ. III	22			2		2
Maintenance Foreman (S.T.)	21					1
Right of Way Agent	19					1
Prin. Engr. Aide	18		1			3
Environmentalist II	18		6		1	14
Operations Foreman (S.T.)*	18					0
Chemist	17		1			1
Environ. Health Techn.	16					1
Sew. Treat. Plnt. Opr.	15			1		2
Maintenance Man (S.T.)	15					1
Sr. Engr. Aide	14		1			5
Heavy Equip. Opr.*	12		1			1
Engr. Aide	11	5				5
Laborer	8	4	1			6
Lab Aide	6				1	0
Subtotal		<u>9</u>	<u>13</u>	<u>6</u>	<u>3</u>	<u>55</u>
TOTALS		<u>11</u>	<u>28</u>	<u>12</u>	<u>6</u>	<u>125</u>

* New Titles

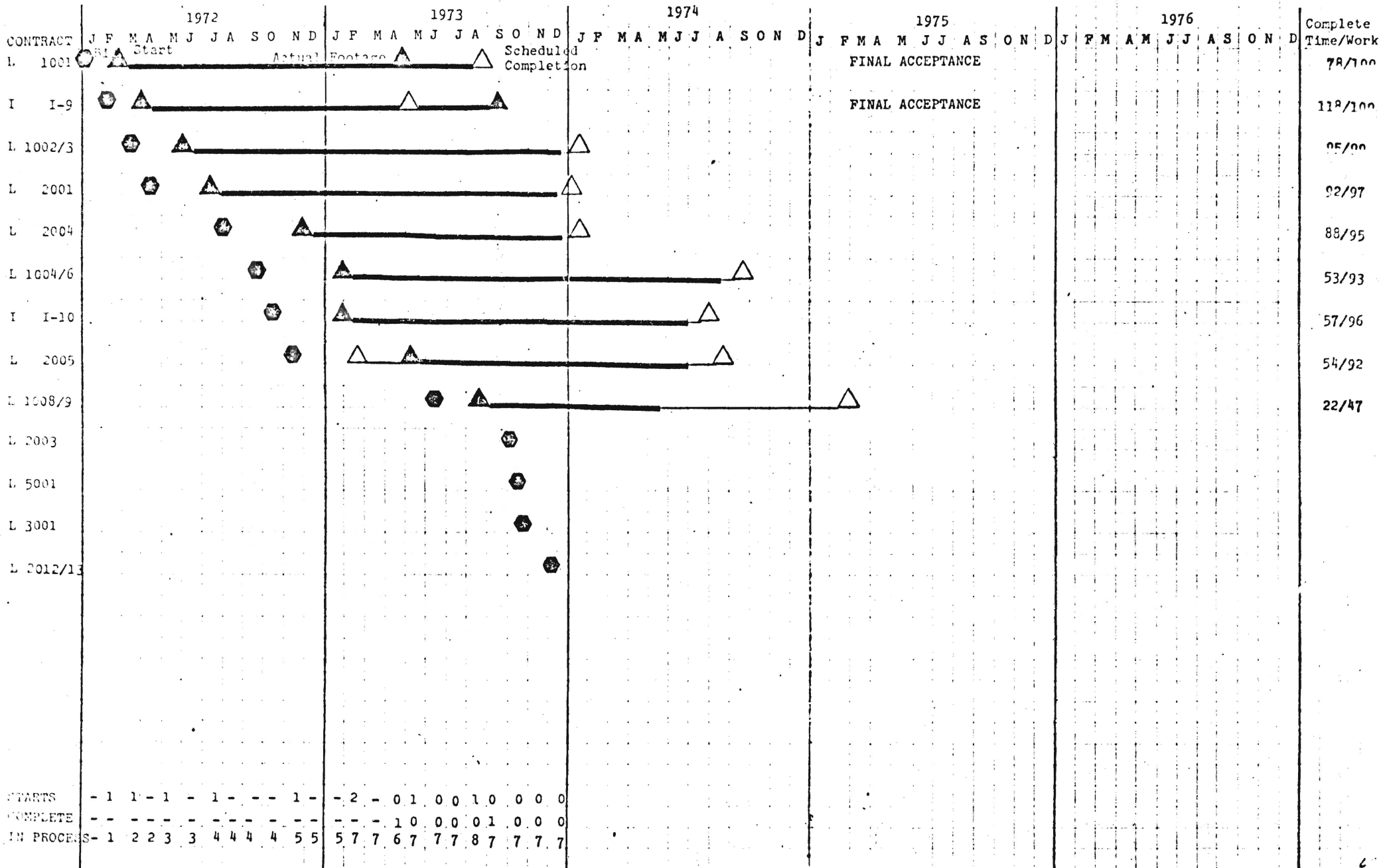
APPENDIX B

DEPARTMENT SPONSORED CAPITAL PROGRAMS

<u>PROJECT #</u>	<u>DESCRIPTION</u>	<u>EST. COMP. DATE</u>	<u>EST. TOTAL COST</u>	<u>PROJECT #</u>	<u>DESCRIPTION</u>	<u>EST. COMP. DATE</u>	<u>EST. TOTAL COST</u>
	<u>Sewage Disposal</u>						
8101	Comprehensive Sewage Study of Five Eastern Towns	1974	75,000	8120	Research & Experimentation in the Use of Recharge Systems in Sewage Disposal	1974	608,500
8102	Construction of New Sewage Treatment Plant For County Sewer District #1-Port. Jefferson	1978	9,110,000	8121	Construction of Nitrogen Removal Facilities at various County Sewage Treatment Facilities	1975	335,000
8103	Construction of New Outfall for County Sewer District #1-Port Jefferson	1978	4,276,000	8122	Improvements to Collection Systems-County Sewer District #1-Port Jefferson	1975	649,000
8104A	Site Acquisition for County Sewer District #1-Port Jefferson	1974	427,000	8123	Acquisition of Property for Recharge Sites	1980	6,000,000
8105	Reconstruction of Pumping Station & Force Main for County Sewer Dist. #1-Port Jeff.	1976	265,000	8124	Acquisition of Sewage Treatment Plant Sites	1980	7,150,000
8106	Construction of Sewage Treatment Plant & Pumping Station for County Sewer Dist. #3-Southwest	1977	55,800,000	8125	Construction of Northeast Extension to South-west Sewer Dist.-Huntington & Babylon	1984	43,900,000
8107	Construction of Outfall for County Sewer District #3-Southwest	1977	79,800,000	8126	Planning for construction of County Sewer Dist. East & Northeast of Sewer Dist. #3-Islip, Brookhaven & Smithtown	1985	250,000
8108	Construction of Intercepting Sewers for County Sewer District #3-Southwest	1978	210,200,000		TOTAL EXISTING PROJECTS		\$ 675,121,000
8109	Acquisition of Right-of-Way for Construction of Southwest Sewer District	1976	1,851,500		<u>Water Supply</u>		
8110	Construction of Lateral Sewers for County Sewer District #3-Southwest	1980	240,200,000	8201	Construction of Test Wells	1975	1,200,000
8111	Soil & Foundation Engineering Services for County Sewer District #3-Southwest	1974	500,000	8202	Study of Salinity Effects on Bay Ecology	1974	25,000
8112	Preparation of Special Assessment Rolls for County Sewer District #3-Southwest	1974	125,000	8203	Construction of Salt Water Intrusion Wells	1975	215,000
8113	Interim Improvements to County Sewer District #1-Port Jefferson	1973	287,000	8204	Submarine Borings adjacent to Sewer Outfalls	1975	60,000
8114	Interim Improvements to County Sewer District #2-Holbrook	1974	95,000	8205	Water Budget Verification Studies	1975	116,000
8115	Acquisition of Improvements to Huntington Sanitary Corp. Sewage Treatment Facilities	1975	1,800,000	8206*	South Fork Water Resources Study	1976	320,000
8116	Acquisition of & Improvements to Suffolk San. Corp. Sewage Treatment Facilities	1976	1,672,000	8207*	Study of Effects on Pollution of the Ground Water due to Agricultural & Turf Fertilization	1976	381,000
8117	Acquisition of & Improvements to Selden San. Corp. Sewage Treatment Facilities	1977	6,110,000		TOTAL EXISTING PROJECTS		2,317,400
8118	Construction of County Sewer Dist. in the Area of Westhampton Beach	1979	3,410,000		<u>Solid Waste Disposal</u>		
8119	Test Borings in Connection with the Construction of County Sewer District #3-Southwest	1974	225,000	8404	Research for Monitoring Effluents from Existing Incinerators, Residue Landfills & Sanitary Landfills	1975	303,000
					TOTAL EXISTING PROJECTS		303,000
					GRAND TOTAL-ALL PROGRAMS		<u>677,741,000</u>
				*New Projects			

APPENDIX C

SOUTHWEST SEWER DISTRICT BID & CONSTRUCTION SCHEDULE



APPENDIX D

Statistical Comparisons

ENVIRONMENTAL MONITORING DIVISION

	<u>Water</u>	<u>Air</u>	<u>Marine</u>	<u>Enforce- ment</u>	<u>1973 Total</u>	<u>Change vs. '72</u>
Complaints	65	433	56	255	809	-295
Reg. Inspections	19	1243	173	3188	4623	+3249
Reinspections	2	1168	-	344	1514	+76
Violations Found	1	326	13	233	573	-126
Violations Corrected	1	343	13	223	580	-117
Samples	606	3335	959	775	5675	-1410

ENGINEERING DESIGN REVIEWS

	<u>Approved</u>	<u>In Process</u>
<u>Pump Stations</u>		
County	6	-0-
Regulatory	11	-0-
<u>Collection Systems</u>		
County	12	4
Regulatory	24	2
<u>Force Mains</u>		
County	6	-0-
Regulatory	3	-0-
<u>Engineering Reports</u>		
County	10	4
Regulatory	5	8
<u>Sewage Treatment Plants</u>		
County	7	7
Regulatory	7	2
<u>Industrial Waste</u>	54	12
Total Projects - 1973	145	39
Change vs. 1972	+68	-18

CONSTRUCTION INSPECTION

	<u>Projects Completed</u>		<u>Projects In Process</u>		<u>1973 Total</u>	<u>Change vs. 1972</u>
	<u>---S.T.P.</u>	<u>Col.---</u>	<u>----S.T.P.</u>	<u>Col.---</u>		
Subdivisions	5	43	4	26	78	+22
Garden Apts/ condominiums	9	8	7	10	34	+ 4
Municipal	3	2	3	1	9	+ 6
House Connec.	0	78	0	0	78	+46
.W.S.D.	0	3	0	6	9	+ 4
Other	7	9	10	9	35	+12
Total	24	143	24	52	243	+91