IMPLEMENTATION OF THE FEDERAL WATER POLLUTION CONTROL ACT

(Review of the Southwest Sewer District, Suffolk County, Long Island, New York)

(94-71)

HEARING

BEFORE THE

SUBCOMMITTEE ON INVESTIGATIONS AND REVIEW

OF THE

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION HOUSE OF REPRESENTATIVES

NINETY-FOURTH CONGRESS

SECOND SESSION

SEPTEMBER 24, 1976, AT FARMINGDALE, N.Y.

Printed for the use of the
Committee on Public Works and Transportation

U.S. GOVERNMENT PRINTING OFFICE
79-172 WASHINGTON : 1976

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

ROBERT E. JONES, Alabama, *Chairman*

JIM WRIGHT, Texas
HAROLD T. JOHNSON, California
DAVID N. HENDERSON, North Carolina
RAY ROBERTS, Texas
JAMES J. HOWARD, New Jersey
GLENN M. ANDERSON, California
ROBERT A. ROE, New Jersey
TENO RONCALIO, Wyoming
MIKE McCORMACK, Washington
JAMES V. STANTON, Ohio
BELLA S. ABZUG, New York
JOHN B. BREAUX, Louisiana
BO GINN, Georgia
DALE MILFORD, Texas
NORMAN Y. MINETA, California
KENNETH L. HOLLAND, South Carolina
ALLAN T. HOWE, Utah
ELLIOTT H. LEVITAS, Georgia
JAMES L. OBERSTAR, Minnesota
JEROME A. AMBRO, New York
HENRY J. NOWAK, New York
ROBERT W. EDGAR, Pennsylvania
MARILYN LLOYD, Tennessee
JOHN G. FARY, Illinois
TED RISENHOOVER, Oklahoma
W. G. (BILL) HEFNER, North Carolina

WILLIAM H. HARSHA, Ohio
JAMES C. CLEVELAND, New Hampshire
DON H. CLAUSEN, California
GENE SNYDER, Kentucky
JOHN PAUL HAMMERSCHMIDT, Arkansas
BUD SHUSTER, Pennsylvania
WILLIAM F. WALSH, New York
THAD COCHRAN, Mississippi
JAMES D. ABDNOR, South Dakota
GENE TAYLOR, Missouri
BARRY M. GOLDWATER, JR., California
TOM HAGEDORN, Minnesota
GARY A. MYERS, Pennsylvania

SUBCOMMITTEE ON INVESTIGATIONS AND REVIEW

JIM WRIGHT, Texas, *Chairman*

DALE MILFORD, Texas
KENNETH L. HOLLAND, South Carolina
JAMES J. HOWARD, New Jersey
TENO RONCALIO, Wyoming
NORMAN Y. MINETA, California
ELLIOTT H. LEVITAS, Georgia
JEROME A. AMBRO, New York
JAMES L. OBERSTAR, Minnesota
JOHN B. BREAUX, Louisiana
ALLAN T. HOWE, Utah
HENRY J. NOWAK, New York
ROBERT W. EDGAR, Pennsylvania
TED RISENHOOVER, Oklahoma

JAMES C. CLEVELAND, New Hampshire
DON H. CLAUSEN, California
GENE SNYDER, Kentucky
THAD COCHRAN, Mississippi
BARRY M. GOLDWATER, JR., California
GARY A. MYERS, Pennsylvania

CONTENTS

TESTIMONY

MATERIAL RECEIVED FOR THE RECORD

MATERIAL RECEIVED FOR THE RECORD AND RETAINED IN SUBCOMMITTEE FILES

Enclosures with the letter, dated October 6, 1976, from Richard G. Lambert, County Legislator, Suffolk County, N.Y., to Chairman Jim Wright consisting of petitions signed by Suffolk County residents, demanding a moratorium, independent evaluation of, and renegotiation of existing contracts of, the Southwest Sewer District.

Exhibits, attached to the Report of the Special Committee on Technical Aspects of Southwest Sewer District, July 19, 1976.

Letter and accompanying exhibits to Hon. Louis J. Lefkowitz, Attorney General, State of New York, from Mr. Charles A. Pulaski, chairman, Committee for Water Preservation, Inc., Bay Shore, N.Y.

Reports, affidavits, and correspondence submitted by the Environmental Defense Fund in support of testimony:

Petition for Environmental Impact Statements Concerning Federal Grants For Construction Of Sewage Treatment Facilities In Nassau And Suffolk Counties, N.Y. (undated).

Letter, dated July 16, 1974, to Hon. Russell E. Train, Administrator, and Mr. Gerald Hansler, Regional Administrator, U.S. Environmental Protection Agency, from James T. B. Tripp, Counsel, and Robert H. Harris, Ph. D., Staff Scientist, Environmental Defense Fund.

Preliminary Draft Report on Preliminary Analysis of Organic Chemicals and Heavy Metals in Existing and Potential Recharge Waste; Karen M. Slimak, Versar, Inc., and Robert H. Harris, Ph. D., Environmental Defense Fund.

Analog—Model Analysis of Effect of Waste-Water Management on the Ground-Water Reservoir in Nassau and Suffolk Counties, N.Y., Report I: Proposed And Current Sewerage; U.S.G.S. Open-File Report 76–441.

An analysis of salinity variations within Great South Bay, N.Y.; Paul D. Moskowitz, Environmental Defense Fund, April 14, 1975.

Water Quality Management On Long Island: A Case For Recycling Municipal Wastewater By Groundwater Recharge; Robert H. Harris, Ph. D., Environmental Defense Fund, October 28, 1975.

Analog—Model Analysis of Hydrologic Effects of Sewerage in Southeast Nassau and Southwest Suffolk Counties, Long Island, N.Y., U.S.G.S. Open File Report 75–535.

Letter, dated March 4, 1975, to Gerald M. Hansler, P.E., Regional Administrator, Environmental Protection Agency from Robert H. Shielolp, Acting Regional Director, U.S. Fish and Wildlife Service, Boston, Mass.

Letter, dated October 20, 1975, to Mr. Gregory DeSylva, Region II, Environmental Protection Agency, from P. A. Buckley, Chief Scientist, North Atlantic Region, National Park Service.

IMPLEMENTATION OF FEDERAL WATER POLLUTION CONTROL ACT

(Review of the Southwest Sewer District, Suffolk County, Long Island, New York)

FRIDAY, SEPTEMBER 24, 1976

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON INVESTIGATIONS AND REVIEW
OF THE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION,
Farmingdale, N.Y.

The subcommittee met, pursuant to notice, at 9:10 a.m., in Roosevelt Hall, Farmingdale, N.Y., Hon. Jim Wright (chairman of the subcommittee) presiding.

Present: Representatives Wright and Ambro.

Staff present: George M. Kopecky, chief investigator; Robert Prolman, professional staff member; Jack Schenendorf, minority counsel; Mrs. Betty Wright, assistant to the chairman; Miss Agnes M. GaNun, staff assistant; Mrs. Susan Lucey, staff assistant; and Miss Joan Kovalic, staff assistant.

Mr. WRIGHT. The subcommittee will be in order.

The Subcommittee on Investigations and Review of the United States House of Representatives Committee on Public Works and Transportation is indebted to the State University of New York in Farmingdale for permitting us the use of these facilities for this hearing.

We are honored that Dr. Charles Laffin, Jr., the president of the university, is here. I believe he has a word of welcome that he wants to express to us.

Dr. Laffin.

TESTIMONY OF DR. CHARLES LAFFIN, JR., PRESIDENT, STATE UNIVERSITY OF NEW YORK AT FARMINGDALE

Dr. LAFFIN. Good morning, Congressmen.

As president of the college, we are very happy to have the facilities of this campus used for public purposes, as it is at the present time; and we welcome the subcommittee and all those who are taking part in this. We hope you will have a pleasant and productive day.

If there is anything we can do, we will have people here to make it comfortable, convenient, and rewarding.

Thank you for coming.

Mr. WRIGHT. Dr. Laffin, thank you. The cooperation that you and your staff have extended to our subcommittee staff has been excellent. You make us feel at home.

We glory in that hospitality.

Today this subcommittee is launching a formal investigation into the causes of the apparently endless frustration associated with the development of the Southwest Sewer District of Suffolk County.

At the outset, let it be known that we are here neither to support nor condemn what has thus far been accomplished. We are here to find out the why and how of things.

Our mission will probably be better understood when it is pointed out that although your local project is one of the largest public works ever attempted, it is not by any means the largest; and it is one of many across the Nation with which this subcommittee must concern itself. We must constantly test whether the laws Congress passes are adequate and workable, and enforceable.

So, we are here not to teach but to learn; not to preach but to listen.

Among the things we want to learn is why an undertaking ostensibly designed to protect and perpetuate the water supply of this area, thus making it a happy place to live for generations to come, has so increased in cost that there is virtual panic among those for whom it is being constructed.

When the bond issue was approved by referendum in 1969, the estimated cost of the project was approximately $265 million. Today the contemplated cost has already exceeded $600 million.

Such an increase can best be described as horrifying, and, understandably, in many quarters, questionable.

We would also like to learn how long the presently estimated hundreds of years of water supply, at this moment pooled at 1,000 feet deep beneath us, will last once the district starts to pump it into the ocean.

Is there no way to recapture the water?

Will the planned pumping out to sea so deplete the water table that ultimately there will be no water—other than the saltwater which has intruded?

Will the taxpayers then be left to pay for an unusable sewer system?

Indeed, was a project of this magnitude warranted?

These are serious questions to raise, and while I certainly do not suggest the answers, I think it is incumbent upon us to get the answers; the best and most reliable answers that are available.

Mind you, while the subcommittee poses these questions, they did not originate with us.

What understanding we have of local conditions was initiated by the constituents of Congressman Jerome Ambro, who is a member of this subcommittee. It was at his instigation that we sent out our investigators many months ago.

And it is because of their findings and Mr. Ambro's genuine concern that we are here today.

It seems only appropriate, therefore, that for the purposes of this hearing I turn the gavel over to Mr. Ambro and ask him to chair today's hearing. Surely, his familiarity with both the area and the people will implement our activities, and expedite the hearing and assist us in our findings.

So, Mr. Ambro, with your permission, I should like for you to be the chairman of this hearing.

Mr. AMBRO [presiding]. Thank you very much, Mr. Chairman. I appreciate that.

The hearings that we open today are extremely important, not only for the people who reside in the southwest sewer district but also to all the residents and taxpayers of Suffolk County on whose full faith and credit the bonds to finance the project rests, and to all of the people of the United States who have a vital stake in clean drinking water, in the natural resources that assure clean water and in environmental preservation generally. One segment of the Nation's environmental program was the $18 billion pure waters program passed by Congress, slowed down by impoundment, both direct and bureaucratic, and started up again as the result of a court decision.

This project, supported in part by Federal funds coming from that bill, is one of the largest sewer construction projects in the United States. It has nationwide ramifications from a number of points of view.

For example, the policies, procedures, and practices of the agencies at various levels of government in overseeing the project will be not only the focus of these hearings on this project and of a resultant report and action, but this investigation surely will represent in microcosm the successes and failures of the program in other areas of the Nation.

Furthermore, since in most States a referendum is necessary to permit initiation of this kind of a project, one can easily predict that the experience in the southwest sewer district, due to escalating costs and oppressive impact on taxpayers, is so negative that only the most strenuous efforts to reverse an equally horrendous ecological situation would have to be present in order to have a referendum succeed under the present financing formulas.

Deliberately contrived initial project cost estimates, inflation, contracts which favor the contractor, over-ambitious design, faulty quality construction, engineering rather than sound interdisciplinary environmental input, less than current technology, irresponsible and apathetic public officials; all of these, some of these, or none of these may be responsible for the plight of the southwest sewer district.

Outright corruption, political manipulation, greed and a public-be-damned attitude may be other ingredients in the situation before us. These hearings and this investigation are not prosecutorial in nature, its lines of inquiry may pass close by criminal acts, but there are a number of ongoing probes by prosecutors at many levels of government looking into these.

The focus and thrust of the investigation by the Committee on Public Works and Transportation of the U.S. Congress is on the effectiveness of the water pollution control program, its costs and its financing, its inspection and audit procedures, its design and the quality of construction, with a view to determining whether or not the existing laws and supporting funding formulas are drawn well enough to assure that this and other plans authorized by the same legislation throughout the Nation can indeed be carried to completion to the benefit of the public as intended.

One significant aspect of all of this, unique to Long Island, is a determination as to whether or not this project, with its 750 miles or more of collector sewers, its 75 miles or more of interceptors, its conventional secondary waste water treatment plant with a design capacity of 30 million gallons a day, its 5 to 6 miles of ocean outfall pipe and the absence of tertiary or recharge capability, will do more harm than good.

Congress and the Committee on Public Works and Transportation have the specific responsibility to review all of these matters and make a determination. Given the massive amount of work that the Congress has and the severe time constraints on its Members, I must, for the millions of people directly and indirectly involved here on Long Island, and in the Nation, in the success of the pure waters program, express my appreciation to the members of the committee, but most especially my deep thanks to Congressman Jim Wright of Texas, who opened this meeting, the chairman of the Subcommittee on Investigations and Review, for the time and the effort and the understanding that he has personally devoted to this inquiry and for which we are all indebted.

I must thank, as well, members of the staff of investigators, who have done such a good job: George Kopecky, Bob Prolman, John O'Hara, Jack Schenendorf, and all the rest.

Again, given the time constraints, if you can proceed as efficiently as possible, we will appreciate it.

I would like to call up the first panel, Hon. Richard Lambert, who will be accompanied by Aldo Andreoli, who is the Principal Public Health Engineer for Suffolk County Department of Health Services; August Guerrera, Chief Chemist, Suffolk County Water Authority; Dr. Lee Koppelman, Executive Director of the Nassau-Suffolk Regional Planning Board; and James Tweedy, Professional Engineer.

Gentlemen, I think I might say at the outset now, and this will be the case with respect to all of the presentations, we have asked for a 5-minute summary of your statement which will allow time for some discourse.

The full text of your written statements, without objection, will be included in the record.

Mr. Lambert, if you will, begin the panel discussion.

PANEL CONSISTING OF HON. RICHARD LAMBERT, COUNTY LEGISLATOR; ALDO ANDREOLI, PRINCIPAL PUBLIC HEALTH ENGINEER, SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES; AUGUST GUERRERA, CHIEF CHEMIST, SUFFOLK COUNTY WATER AUTHORITY; AND JAMES TWEEDY, PROFESSIONAL ENGINEER

Mr. LAMBERT. Thank you, Congressman Ambro, and thank you, Chairman Wright, for coming all the way here to Suffolk County to examine and look further into this tremendous problem we have.

Also, special thanks to the two counsels that I know well, Mr. Kopecky and Mr. Prolman, who have spent a great deal of time in Suffolk County, a great deal of time in the examining of all aspects of the Southwest Sewer District as it currently exists.

I have a brief statement that I would like to state for the record.

As you said, I am Legislator Richard Lambert of West Islip and Bay Shore, which is situated right in the heart of the Southwest Sewer District.

I am also honored to be chairman of the Blue Ribbon Committee inspecting aspects of the Southwest Sewer District.

The southwest sewer project was conceived without proper investigation of the need, the size, impact, and the alternatives, promoted with misinformation, designed without cost and environmental safeguards, implemented without cost and quality control, and now defended by its supporters as inevitable and without any possibility of independent evaluation or redesign.

Consider all this along with the incredible cost of $1.48 billion-plus, and what we may have is one of the largest, if not the largest, public works ripoffs in American history, a project that may very well end up destroying the communities within the southwest sewer district area, a project where local residents have to live with taxes too high for us to pay, a depleted water table, dried up lakes and streams, potential saltwater intrusion into our drinking water, and an ecologically damaged Great South Bay.

What will be the value of our homes and businesses in which we have invested so much?

As a county legislator since January, and as Chairman of the Special Committee to Study Technical Aspects of the Southwest Sewer District, I have been directing a tremendous amount of my energies and time in attempting to get to the bottom of this project.

The initial interim report to the special committee, first of what will be a series of many reports, is an important document which raises some of the most important questions concerning this project.

It makes the following initial recommendation:

(1) A moratorium on all further sewer contracts until (2) an end evaluation has been completed and (3) all existing contracts have been renegotiated.

Not one of these three important recommendations has gained support of the county executive or a majority of the members of the legislature to date.

Indeed, pressure has been forthcoming to me and to other members of the committee to stop interfering. On the contrary, I believe attention must be increased.

On the very direct concern we all have regarding costs to residents of the area, let me first say that the figure of $600 million-plus for interest may well be inaccurate and underestimated.

We have never been given complete enough information about costs of the project to evaluate the accuracy of the county executive's figure.

In addition, maintenance costs for the system, energy costs for running the system, and realistic hook-up costs are not available and may add substantially to the real cost of the project.

All this indicates that the tax burden of the individual homeowner, taking into account Federal and State aid, will still be unreasonable and unacceptable and unbearable.

The ranges of the active criticisms of the existing project grows daily within the southwest sewer district and throughout Suffolk County.

In a moment I will introduce the members of the special committee, but first, as a legislator within the Southwest Sewer District and as a concerned homeowner and resident, I would like to recommend, if it has not been requested to date, that a full audit of this project be undertaken by the General Accounting Office at the request of Congress, and that the Public Works Committee lend its support to the recommendations of the special committee studying technical aspects of the sewer district before we allow more construction to continue and more money to be spent on this massive project.

There are many aspects of the history of the Southwest Sewer District, which I hope to touch upon very briefly today, but I can see by the opening remarks, of both Chairman Wright and Congressman Ambro, that not only has the report which we developed been devoured, but Mr. Ambro has lent his expertise as a resident of the area and as a student of the history of the southwest sewer project to Chairman Wright and the other members of the staff.

There are many aspects, economic aspects.

We started with a referendum which was, in fact, approved by the people of the Southwest Sewer District, $291 million for construction, which was publicly, actively sold as having an impact of 60 cents per $100 of full value on the owners in the district, plus $50 user charge. That $50 user charge is the same one used in 1967 at the first unsuccessful referendum, and it exists today.

As recently as last week I requested the Department of Environmental Control to provide me with updated energy costs in running such a system. They said such was not available at this time, and if I expected to have it for this meeting I would be sorely disappointed.

I do expect to have them shortly. I do hope to have them shortly as opposed to expect.

What has happened since 1969 is that the equalization rate in the town of Islip portion of the Southwest Sewer District has been cut in half, which has the effect, as you well know, of doubling the full value without any change in the assessed valuation.

This, in fact, virtually doubles the ad valorem tax, even if the 60 cents per $100 rate remained good.

At the latest reading, the cost is $1.38 per $100.

Now, this means, for the average homeowner in the Southwest Sewer District, increased sewer taxes of approximately $600.

There has been much talk about applying the county sales tax at some time in the future, but at what time in the future has never been determined. It has not been determined whether it is after the 50 cents per $100 is reached, after $1, after $1.25.

Investors say we cannot carry $1.38 per $100, but they do not know what we can carry, and everybody refuses to tell us what, in fact, our taxes will be.

Mr. AMBRO. Mr. Lambert——

Mr. LAMBERT. Yes, sir.

Mr. AMBRO [continuing]. I wonder if I could ask you at some point very soon to abbreviate your verbal statement so that we can have a bit of an interchange.

Mr. LAMBERT. Thank you.

I am inclined to get carried away at times. I appreciate your bringing that up.

Ecologically, the potential saltwater intrusion, the USGS reports on the water table, all of these things make us move from one standpoint to an almost totally convinced standpoint that regardless of the Federal aid that might be forthcoming, regardless of what the costs may be to the homeowner in the Southwest Sewer District, that this is an undesirable project as it is currently conceived and even if we got it for nothing, or even if we were paid to take it, it would be a bad program to force upon these people.

It is no longer something that is of dubious value. It has been proven more and more that it is of negative value.

I will not touch upon the contracts which exist with our design consulting engineers. Other members of this panel will do so.

Taking you at your word, Congressman Ambro, at this point I would like to introduce Dr. Aldo Andreoli, who is the Principal Sanitary Engineer of the Department of Health Services of Suffolk County and perhaps we can have a brief statement from Dr. Andreoli and Mr. Guerrera, or would you prefer to move right into questions and answers at this point?

Mr. AMBRO. I might note too at this point in the record while the agenda indicates that Lee Koppelman will be here, he is not.

Mr. LAMBERT. The agenda does so indicate.

I have no explanation other than he might have gone to the wrong church, as one of the other members did.

Mr. AMBRO. We would be happy to hear from Mr. Guerrera.

I would like to commend you, Mr. Lambert, for your dedication and responsibility with respect to all of this.

I did indeed read your report. I have a précis of it in front of me.

Before we get to the other members of the panel, I understood very recently that the status of your committee has changed.

Is that correct?

What is the status of that blue ribbon committee?

Mr. LAMBERT. To my utter shock and disbelief, in yesterday's morning mail I received a memorandum dissolving the committee. Such memorandum was from the presiding officer of the county legislature and it dissolved the committee and discharged the members as having completed the task.

We have made very clear in the past that the report we submitted was an interim report; that it was the beginning. The recommendations we made were recommendations we made in order to proceed further to the real heart of the matter. I was utterly shocked to receive that communication yesterday.

Mr. AMBRO. So at the moment the blue ribbon panel is disbanded?

Mr. LAMBERT. At the moment the blue ribbon panel with its official constituted status conferred upon us by the presiding officer of the legislature, no longer exists.

However, the members of this particular panel are bound and determined. I will let them speak for themselves in that particular matter.

We feel our work is incomplete and we wish to move forward.

Mr. WRIGHT. Mr. Chairman, at this point, for our more detailed and complete perusal, we have a copy of the report. It is quite a lengthy and voluminous document, containing, among other things, an agenda and exhibits.

I should like unanimous consent that this report itself be incorporated into the record of these hearings.

Mr. AMBRO. Without objection, so ordered.

Mr. LAMBERT. I very much appreciate that, Congressman Wright.

[The material referred to follows:]

REPORT OF THE SPECIAL COMMITTEE ON TECHNICAL ASPECTS OF SOUTHWEST SEWER DISTRICT

(July 19, 1976)

SPECIAL ACKNOWLEDGEMENTS

Special thanks and appreciation are due those members of this Committee who contributed their knowledge and expertise, their dedication to the task before us and their selfless willingness to spend a prodigious amount of their personal time.

To the Clerk of the Suffolk County Legislature, Terrence G. Pearsall, for his tireless and professional efforts, in a voluntary capacity, in reproducing the numerous copies of this lengthy and comprehensive report, I offer my heartfelt thanks. And to Mr. Pearsall's staff members, Lorette Horsboll and Charlotte Golan, we offer thanks for their professional performance and patience in transcribing the proceedings of our meetings. To my own Legislative District Secretary, Lisa Riordan, who once again did all manner of work far beyond her official District function, I convey my deepest thanks and appreciation. This Committee would have found it utterly impossible to present this report at this time without the unselfish and voluntary contribution of her personal time and effort.

RICHARD G. LAMBERT,
Chairman.

REPORT OF COMMITTEE ON TECHNICAL ASPECTS OF THE SOUTHWEST SEWER DISTRICT

After many months of intensive questioning by Suffolk County Legislators re: aspects of the Southwest Sewer District, the intension to create two official "Special" or "Blue Ribbon" committees was announced by the Presiding Officer of the Sulffolk County Legislature on April 6, 1976. The announcement was in direct response to the County Eexcutive's plea on March 24, 1976 for legislative action allowing ½ to 1% of the county sales tax to be applied to the financing of the Southwest Sewer District. One committee was to be Finance-oriented; the other, Technical. Members of the Finance committee were named on April 22, 1976 and that committee issued its first and apparently final report on May 11, 1976. That committee's report addressed itself solely to a refinancing or fund raising plan for the project as currently conceived. The reasons for escalated engineering/construction costs and the possible solutions toward reduction or even control of engineering/construction costs were apparently not within the scope of that committee.

Members of the "Committee on Technical Aspects of the Southwest Sewer District" were named on May 7, 1976 and moved immediately toward formulating a charter for the committee's activities. Since the companion Financial committee had solely addressed itself, in its brief existence, to refinancing, we aimed for full coverage of the situation with no fear of redundancy.

Initially, we addressed ourselves to the following questions: What technical alternatives, if any, are still possible for the Southwest Sewer District? Which alternatives will realize cost savings to the district? Will these alternatives provide needed facilities for the populace and still maintain environmental integrity?

Committee meetings were held on Long Island on May 18, 24, June 1, 5, 7, 16, 19, in Albany with State DEC on June 26, in New York City with Federal EPA on July 2 and on Long Island on July 19. Numerous other individual conferences and field trips were conducted by committee members. Committee members include:

Chairman—Richard G. Lambert, Suffolk County Legislator.
Anthony Noto, Suffolk County Legislator.
Lee E. Koppelman, Exec. Dir. Nassau-Suffolk Regional Planning Board.
Aldo Andreoli, P.E., Principal Sanitary Engineer, S.C. Dept. of Health Services.
August Guerrera, Laboratory Director, Suffolk County Water Authority.

William Graner, P.E., Chief Engineer Suffolk County Dept. of Environmental Control.

James E. Tweedy, P.E., Private Practice.

Dr. Meredith Thompson, P.E., N.Y.S. Asst. Comm. of Health (retired).

At its first meeting on May 18th, after reviewing the data the majority of the committee was convinced that the number of possible technical alternatives available for consideration would be severely reduced with a continuation of the awarding of contracts by the Suffolk County Department of Environmental Control.

In view of the responsibility of the committee to look at all technical aspects of the program and in order to keep all options open, the committee passed a formal resolution requesting the County Legislature to require the Suffolk County Department of Environmental Control to refrain from advertising additional contracts for a period of thirty (30) days. The Presiding Officer gave assurance that such resolution would be passed on to the Suffolk County Legislature at a Special Meeting called to consider certain aspects of the Southwest Sewer District. This 30-day hiatus was designed to provide the committee with the opportunity for further briefing and formulation of recommendations. No formal action on this matter was taken by the Legislature; however, no additional contracts have been advertised as of this date.

The committee requested data from the Suffolk County Department of Environmental Control. It soon became evident that there was a reluctance to provide a portion of the requested information and that the data was neither readily available nor complete when supplied. Logical presentation of the information used for design and development of current SWSD was not made available. The committee was forced to probe into a number of areas to obtain much of the needed basic data.

TECHNICAL CONCERNS

Population and Population Equivalencies.—There has been a continuing stream of revisions in population and flow criteria from the original report. The initial equivalency population projections for the service area has gone from approximately 413,000 to 942,000 [1] while the district population projection was estimated at 300,000 for 1980.[2]

It should be noted that most of the increased service area flow was attributed to industrial equivalency estimates. Industrial equivalency estimates made in 1969 increased from 13 persons per acre to 25 persons per acre in the estimate made in 1973. When questioned, the Chief Engineer of SCDEC referenced a letter from the Nassau-Suffolk Regional Planning Board to Bowe Walsh, dated June 19, 1973 (Exhibit 11) which was cited as a justification for the new equivlancy. However, upon further investigation, the committee learned that the Nassau-Suffolk Regional Planning Board letter was general in nature and only referred to residential population projections and did not apply to industrial equivalency population. In fact, a letter of July 26, 1974, (Exhibit 12) from the Nassau-Suffolk Regional Planning Board to NYSDEC further stated there have not been significant changes in either population or potential non-residential land within the sewer district in the last ten years that could result in a difference of 100%.

Legal District, Service District snd Ultimate Tributary Drainage Area.—The service district of the Southwest Sewer District extends approximately to the Long Island Expressway and is substantially larger than the legal district which has a northern boundary approximately coinciding with the Southern State Parkway. It should be noted that the service district is smaller than the ultimate tributary drainage which extends generally north of the Long Island Expressway into Huntington and Smithtown. Since the current design calls for the design and/or construction of collectors to serve an area outside the legal district into the service district, the panel requested SCDEC on May 24, 1976, to consider possible cost savings which could be realized if these major collectors were sized to handle only the legal district rather than the larger service district. While the requested report has not been received as of this date, SCDEC stated that typical sizing reduction which could occur include:

Interceptor 108 48″ diameter line reduced to 8″
Interceptor 110 48″ diameter line reduced to 15″
Interceptor 113 24″ diameter line reduced to 8″
Interceptor 117 24″ diameter line reduce to 8″

---

[1] Status report NYSDEC February 26, 1974 p. 10, 11 (Exhibit 9).
[2] DEC fact sheet March 1, 1972 (Exhibit 10).

(Exhibit 8-Minutes of meeting of June 19th of Committee shows complete Listing)

The committee noted that a majority of the north-south interceptors have not been constructed and over 95% of the east-west interceptors have not been constructed.

As an apparent result of the committee's May 24th inquiry of SCDEC, made verbally to the Chief Engineer and in a hand delivered letter to the Commissioner's office, to review the cost savings possible by reducing the size of major collectors to serve only the legal district, letters dated June 22, 1976, from the Environmental Protection Agency, (Exhibit 13) and June 16, 1976 (Exhibit 14) from the New York State Department of Environmental Conservation were produced. Although initial Suffolk County DEC reaction was reportedly disdain, the committee has been repeatedly promised the cost savings estimate on specific dates by DEC's Chief Engineer. Such promises have not been redeemed. The Commissioner has never responded to the Chairman's letter dated and delivered on May 24, 1976.

Both State DEC and Federal EPA expressed their concern that reducing the size of the interceptors *could* affect State and Federal aid to the Southwest Sewer District for failure to provide regional collectors. NYSDEC stated in its June 16, 1976 letter (Exhibit 14) that in order to be eligible for aid the interceptor system must be designed to service the ultimate tributary drainage area. However, it should be noted that the current proposal for the legal district includes interceptors designed to service a "service area" extending approximately to the Long Island Expressway, which area is substantially less than the ultimate tributary drainage area.[3] Which extends approximately to the northern track of the Long Island Railroad in Huntington. The current project is overdesigned for the legal district which extends only to approximately the southern state parkway yet is substantially underdesigned for the ultimate drainage area.

Committee members met with the New York State Department of Environmental Control on June 26, 1976, and the Environmental Protection Agency on July 2, 1976. Notwithstanding the letter of June 16th and 22nd, both agencies stated that:

If an improved, cost effective, method of sewering the southwest sewer district were presented to them for review, they would certainly favorably review aid for these alternates. EPA stated that it would approve any changes which had State DEC approval.

The EPA reminded the committee that the plans submitted to them by local agencies had total local endorsement; *it is the responsibility of those same local agencies to initiate any alternatives which would be more cost effective.* The meetings with the NYSDEC and EPA established the fact that a degree of flexibility *DOES* exist in both agencies and that alternatives which could reduce the cost of the project and yet maintain the integrity of the environment would be viewed favorably by both agencies.

The design of the 72-inch diameter outfall sewer line, indicates an inconsistency with other design factors. It is larger than needed for the legal district; *in fact,* it is larger than is needed for the entire service district. (See Status Report Exhibit 9, p 11 & 12) Local, state and federal officials have repeatedly stated that Long Island will eventually be required to recharge its effluent. The committee is concerned with a major commitment to an outfall sewer with a peak capacity of 188 million gallons per day (MGD) plus, which would service an area far beyond the legal district which will supposedly generate an average of 30 MGD. In fact, environmental considerations dictate against proceeding with the outfall line as proposed. Some of the gnawing factors which dictate a critical review of both the size and length of the proposed outfall are:

(a) The outfall is designed to handle two times the peak flow when factors substantially lower than this have been acceptable under state and federal guidelines.

(b) The fact that eventually we must recharge (See U.S.G.S. paper Analog Model Analysis Effecting Waste Management on Ground-Water Reservoir in Nassau and Suffolk Counties—Exhibit 17 and U.S.G.S. paper Factors Affecting Declining Water Levels in a Sewered Area of Nassau County—Exhibit 18.)

(c) The length of the ocean outfall was based on an overly pessimistic bacteriological population of 20,000/100 ml in the chlorinated effluent which automatically makes a longer pipe necessary.

---

[3] Bowe Walsh maps from Comprehensive Report depicting ultimate drainage area to be served by original sewage disposal district #1 (Exhibit 15) and outling drainage area (Exhibit 16).

Contracts Available at the Riverhead Office of the Clerk of the Legislature.—Samples of engineering and construction contracts which were made available to the committee indicated that these contracts at best were ambiguous. The committee considers that the contracts are ideal from the viewpoint of the designing engineers and contractors, but most undesirable from a governmental or administrative point of view. The sample engineering contracts furnished for review fall into five types:

Type 1—SC Dept. of Public Works for laterals (1970)
Type 2—SCDEC for laterals and interceptors (Exhibit 19)
Type 3—SCDEC for sewer outfall and for Special Services for sewer outfall
Type 4—SCDEC Special Services for laterals and interceptors (Exhibit 20)
Type 5—SC Dept. of Public Works for Water Pollution Control Plant for design and special services

Type 1 and *Type 2* appear to be identical.

Type 3 has many of the characteristics and paragraphs of Type 1 and 2. The Special Services contracts call for scope that appears to overlap design scope. Compensation is to be two times salary and all benefits as outlined on page 15 of that contract. (Exhibit 21)

Type 4 is a Special Service Contract for lateral and intercept sewers that overlaps some design scope. Compensation to be based upon payroll plus 25% for benefits multiplied by a factor of 2 or a total of 250% of gross payroll.

The contracts are vague and general in comparison with the contracts of New York City and Nassau County. Contracts should be made as specific as possible and express the intent of both parties entering into them so that both sides can be in agreement regarding their specific rights and obligations. The wording, at all times, should be clear and specific rather than general in order to avoid disputes and possible over-billing. SCDEC contracts do not meet these standards. Moreover, there are too many unspecified items covered by the open-ended phrase, "when authorized by the Commissioner".

Comparison of Contracts Between Nassau and Suffolk Counties.—Sewage treatment plants for the Nassau County Dept. of Public Works at Cedar Creek and for the Suffolk County Dept. of Public Works at Bergen Point were designed by the same engineering firm of Consoer, Townsend & Assocs. A comparison of the contracts indicates that in Suffolk County contract the Engineer provided inspectional services on the construction of his own design, with compensation on a multiplier of payroll basis. In contrast, the Nassau contract provided for inspectional services by County personnel with the Engineer providing only a resident engineer with the firm receiving a maximum of $2,000.00 per month.

Comparison of Contracts for Engineering Services of Suffolk County and of New York City D.P.W.—"Scope" clauses in SCDEC contracts can cause many problems when extra work is claimed by the Engineer. (Exhibit 22).

In SCDEC contracts all duties under basic services (Exhibit 19 p. 11) are general and vague. Although attempts to outline the responsibilities in design contracts and special services contracts are made, they are not realized. The risk of double costs to the County is inherent in these overlapping contracts where the responsibility for the design and the supervision of construction of this design may rest with the same firm.

Special Services Contract; Individual Zone page 11 #1 (Exhibit 20) states and fixes the responsibility as follows:

> Preliminary and final surveys for design.

Individual Zone Design Contract page 12 #4 (Exhibit 19) states and fixes the responsibility as follows:

> Preparation of preliminary design, submission thereof to the Commissioner and other required approving agencies . . .

Special Services Contract page 12 #4 (Exhibit 20) states and fixes the responsibility as follows:

> Preparation of applications and supporting documents for government grants or advances for public works projects.

Individual Zone Design Contract page 12 #9 (Exhibit 19) states and fixes the responsibility as follows:

> Preparation of engineering data, where necessary for regulatory permit applications required by local, state or federal authorities.

Special Services Contract page 11 #2 (Exhibit 20) states and fixes the responsibility as follows:

> Field surveys in connection with the acquisition of easements, photogrammetry, land surveys, establishment of boundaries and monuments and related office computations and drafting.

Individual Zone Design Contract page 13 #17 (Exhibit 19) states and fixes the responsibility as follows:

> The Engineer shall prepare easement acquisition drawings containing information as required by the Commissioner to obtain necessary easements.

The above excerpts are but a few of the examples of some of the ambiguities and double coverage inherent in the contract language. One must bear in mind that the Special Services Contract is being reimbursed on a multiplier basis that is in essence a "Cost Plus" contract whereas the Design Contracts are based upon a percentage of total construction cost.

The same type of apparent conflict in the Outfall Sewer and Treatment Plant Contracts. State Comptroller Leavitt, in an audit report issued June 28, 1976, pages 15 a & b (Exhibit 23), subsequent to the findings of this Committee, expressed similar grave concerns. The Suffolk County Comptroller responded to Chairman Lambert's inquiry, in a letter dated July 13, 1976, (Exhibit 24). He expressed his beliefs regarding the necessity of rectifying aspects of the contracts and establishing steps for evaluation of the work performed.

The requirement of Section 103 of Municipal Law relating to appearances before a Grand Jury is notably absent in these contracts. Also there is no apparent requirement in the contracts for an "Errors and Omissions" insurance policy to protect Suffolk County. In Special Services contract page 12 Section #5 & 9 (Exhibit 20) there should not be any compensation for revisions required to comply with applications for State and Federal aid.

After comparing Nassau County, New York City and the A.I.A. Owner-Architect contracts with the SWSD #3 contracts, it became apparent that the SWSD #3 contracts have a scope that is no more demanding and in many cases less demanding than the contracts of the above mentioned organizations, yet fees paid by Suffolk County are inordinately higher.

EFFECTS ON GROUNDWATER

Since the end of the drought in 1967 and since the enactment of the detergent ban in 1971, the quantity and the quality of the groundwater resource has substantially improved. Water supplies within the legal district are obtained exclusively from Magothy wells which are replenished by recharge from outside the area. In fact, the hydrologic conditions within the Southwest Sewer District create a discharge of groundwater upward out of the Magothy and into the glacial formation. The areas in Suffolk County presently experiencing increasing concentrations of nitrates are outside the Southwest Sewer District service area and are not being sewered. It should also be noted that even in areas completely sewered for long periods, nitrate concentrations in groundwater have persisted and increased and suggest that leakage from sewers may now be a principal source. (See U.S.G.S. paper Nitrogen Content of Groundwater in Kings County, Long Island, New York paper 800–D, Exhibit 25). The only other sewage constituent which has survived passage through the soils and reached the water table causing abandonment of public glacial supply wells was synthetic detergent. This contaminant is steadily disappearing since the ban. Sewering will have a beneficial impact on the water resources in general, but without recharge the potential negative effects on the volume of the groundwaters are serious enough to warrant a detailed reevaluation of the outfall. NOTE: Further to the question of the overall effect on creeks and streams in the SWSD see Suffolk County Commissioner of Public Works Kammerer's letter dated July 6, 1976, with attachments (Exhibit 26).

CONCLUSIONS

Alternatives are still feasible which may produce substantial cost savings to the sewer district. The majority of north-south major interceptors and well over 95% of the east-west interceptors as well as the outfall sewer and major pumping station still have not been constructed. These items represent potential major areas of cost savings to the district. When one considers the criteria utilized for the basis of population projection and how the industrial population equivalency was determined with their related flows, reduction of the outfall sewer pipe to serve only the legal district should definitely be considered. Additional alternatives which were discussed by the committee include:

I. Since the majority of the north-south interceptors and over 95% of the east-west interceptors have not been constructed and are being designed to serve

an area outside the legal district, consideration should be given to reduce the size of these interceptors to handle only the legal district.

II. Cost-benefits of "stage" construction of remaining collection system.

III. Through investigation of providing a second plant which would handle the east end of the district with a recharge system should be considered. This would allow space at the main sewage treatment plant to develop waste treatment facilities, which would have the considerable and additional advantage of improving the effluent making it more amenable to recharge. It would also obviate the necessity for the major pumping station at Awixa Creek and substantially reduce the size of the east-west interceptor.

IV. Cost-benefit investigation of providing alternate methods of serving the area north of the legal district should be undertaken.

V. The elimination of a sewer outfall to be replaced by a program of total recharge which would allow consideration of recharging effluents both within and without the water budget area, i.e., in case of a plant failure, recharge could be accomplished outside the water budget area where public water supply wells would not be affected.

VI. A cost-benefit review of the major gravity interceptors to be replaced by small diameter force mains.

VII. Cost-benefits of re-routing the east-west interceptor to the north, perhaps within the Long Island Railroad vicinity. This could also reduce the size of the north-south interceptors.

VIII. An indefinite moratorium on the continuation of the SWSD must be considered in view of the deletirious effects on lakes and streams, the apparently neutral effect on quality and quantity of water supply and the inevitability and desirability of future recharge.

IX. Review the possible adverse effects on the sewage treatment plant, the collection system and the water supply system which would result from waste which might become septic in lines which will not carry design flows until an area outside the legal district is physically connected, which does not seem to be foreseeable in the near future. The dark cloud of potential loss of aid has been continually raised if any further delay occurs in the progress of SWSD. It should be noted that both State and Federal levels of government have been developing a more acute recognition of the need for broad-based support of sewage programs and there is no reason to believe that such awareness will abate. For, instance, had Suffolk County not proceeded with such haste in initially installing the lateral lines under the "no aid" 1965 legislation, the SWSD would have been eligible for the 85% aid formula under the 1972 legislation. This has resulted in substantial losses of potentially available State and Federal aid.

The prospects of forthcoming additional aid was recognized as early as 1966 in Goodbody & Co. Report to the Chairman of the Suffolk County Sewer Agency. See report "Estimated Costs of Financing Sewage Disposal and Collection Facilities for Proposed Sewer District No. 1, pp. 2 and 3" (Exhibit 27).

RECOMMENDATIONS

Many unanswered questions and concerns became evident to the majority of the committee during review of the Southwest Sewer District project. It is the majority recommendation of the committee that timeliness of action is essential.

The Committee recommends that the Suffolk County Legislature effect a complete moratorium on the advertising or awarding of any further contracts relative to the Southwest Sewer District until such time as independent reports are received and acted upon by the Legislature.

Members:	*Voting*
Lambert	Yes
Noto	Yes
Andreoli	Yes
Guerrera	Yes
Koppelman	Yes
Thompson	Yes
Graner	No
Tweedy	Yes

The Committee also recommends that current design contracts with engineering consultants on those portions of SWSD on which construction has not commenced,

be terminated and no further contracts be awarded to other firms until such time as independent reports are received and acted upon by the Legislature.

Members:	*Voting*
Lambert	Yes
Noto	Yes
Andreoli	Yes
Guerrera	Yes
Koppelman	Yes
Thompson	Yes
Graner	No
Tweedy	Yes

It is the majority recommendation that an independent engineering consulting firm or consortium of firms not currently associated with this project be selected via the RFP (request for proposal) procedure within 30 days of the adoption of a suitable resolution by the Suffolk County Legislature to immediately evaluate the current Southwest Sewer District engineering design to determine:

(a) If the scope is to be maintained are there more cost effective technical options for carrying out the project?

(b) Can existing project be curtailed from its existing scope without significant impairment?

(c) Is the quality of the physical construction adequate?

Members:	
Lambert	Yes
Noto	Yes
Andreoli	Yes
Guerrera	Yes
Koppelman	Yes
Thompson	Yes
Graner	No
Tweedy	Yes

It is further recommended that if it is determined to proceed after receipt of the independent report, and new design is to be commenced, all available consulting firms should be solicited in order to expedite the project in order to receive maximum state and federal aid. Any new contracts must be established so the fees are competitive and not excessive and confiscatory.

Members:	
Lambert	Yes
Noto	Yes
Andreoli	Yes
Guerrera	Yes
Koppelman	Yes
Thompson	Yes
Graner	Abstain
Tweedy	Yes

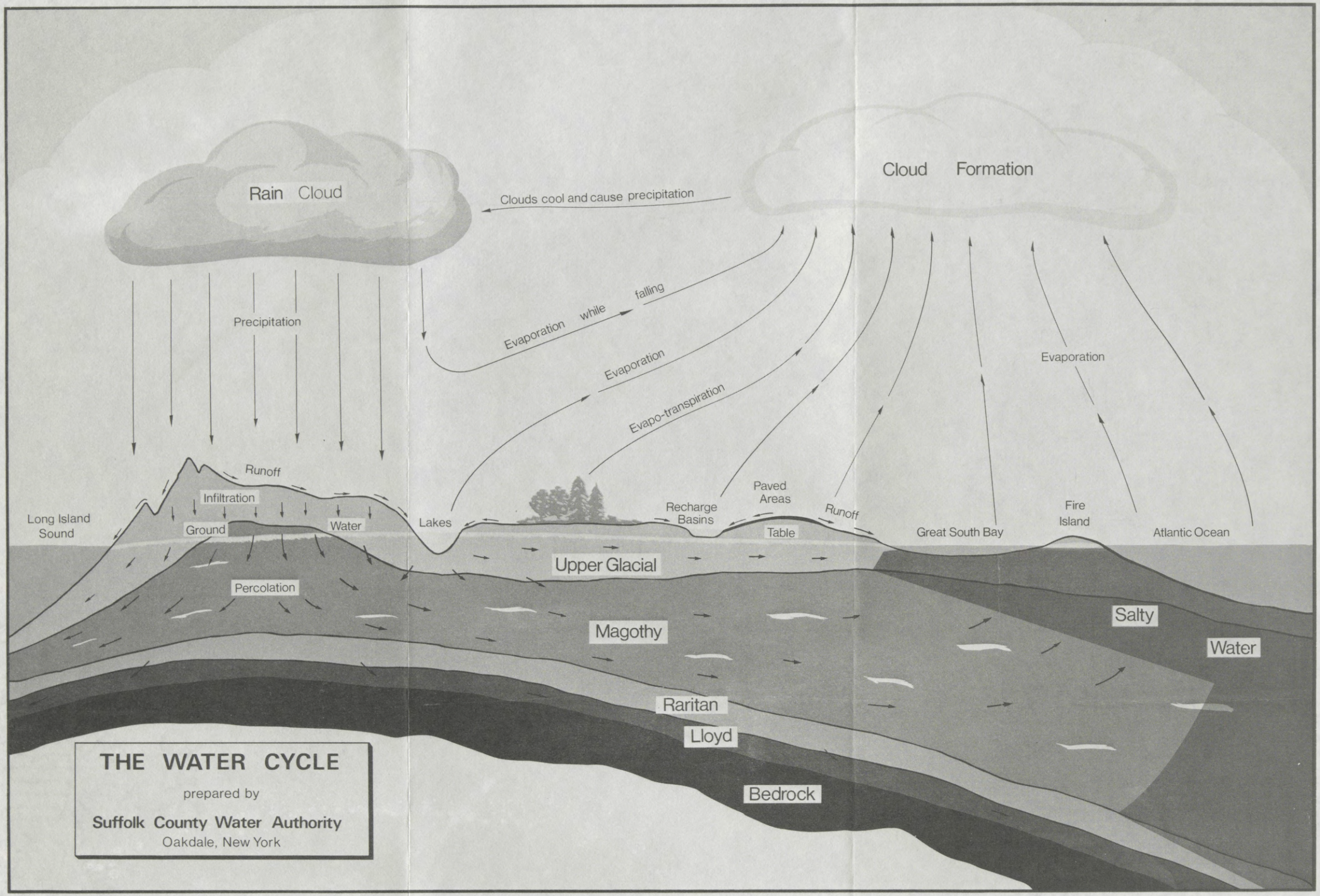
Mr. AMBRO. If we could then, Mr. Lambert, get to the other members of your panel for a brief opening—because we would like to talk about their views, especially with respect to this panel—views on the environmental impact.

I might comment, too, at this point that the GAO will be here. As you know, at the request of Congressman Downey, they were asked to review the project from the audit point of view and I think their testimony will be most telling with respect to your request.

Mr. LAMBERT. Congressman Ambro, if I may make one very brief comment regarding your last question on the status of the Committee.

Since I received such notification yesterday I have been in the process of seeking legal advice on what action I might take to reverse such order for dissolution and I think you ought to know that, sir.

Mr. AMBRO. All right.



THE WATER CYCLE

prepared by

Suffolk County Water Authority

Oakdale, New York

79-172 O - 76 (Face p. 15)

Mr. Guerrera, Mr. Andreoli, Mr. Tweedy, if you will say a word, we would appreciate it.

Mr. GUERRERA. Mr. Ambro, I would like to use this chart, if I may.

Mr. AMBRO. Certainly.

Mr. GUERRERA. I would like the committee to recognize that the water resources on Long Island occur and are developed in a very unique manner and that we have essentially a closed system, being an island surrounded by salty water and we obtain all our water supplies from the ground.

So the original sewer project that was proposed and defeated in 1967 involved more than two-thirds of the island or the width of the island, including all of the major recharge areas, even to the deeper formation.

However, what is being constructed now only serves the southern part of the island in which essentially the ground water is already discharging to sea, so that the pressures for protecting ground water resources are not the same as they were then.

Now, there is still time to look at alternatives to the sewer construction as it is being proposed now.

We obtain all of our water from wells. Fifteen years ago, when we began to see evidences of cesspool leachings in the shallower or the upper glacial formation the Water Authority responded to that change in water quality by drilling deeper wells into the Magothy formation 600 or 700 feet deep.

This water is recharged in the middle third of the island and reaches the Magothy. It has been estimated that there may be hundreds of years involved between the time a drop of rain falls in the middle of the island near the ground water divide, travels downward into the glacial formation, through the glacial formation and into the Magothy formation, and then makes its way out to sea.

As part of the technical committee, I tried to make the point that there was time for us to stop and look at some of the other alternatives to our present method and that we can still protect the ground water resource and serve the public with a safe drinking water without the crisis conditions under which we are operating.

Mr. WRIGHT. Mr. Guerrera, do you believe that it is possible to achieve this with septic tank operations?

Mr. GUERRERA. Well, we have been doing it all along.

The major constituent of sewage from cesspools and septic tanks that caused us to abandon the shallow wells was an artificial constituent of sewage, which we legislated out of the sewage, and the ground water has improved.

Mr. WRIGHT. Phosphates?

Mr. GUERRERA. Not phosphates, but synthetic detergents. We were able to legislate synthetic detergents out of the sewage and the ground water has improved in the last 5 or 6 years.

Mr. WRIGHT. Are you suggesting further that the percolation of water by means of septic tanks and cesspools has not caused a deterioration in the quality of the water in the Magothy formation?

Mr. GUERRERA. That is correct. It is mainly because it is old water. When the first referendum was proposed in 1967, the Suffolk County Water Authority publicly supported that project because it included the recharge area. We also stipulated that we were in favor of that project as long as it included a recharge program.

The first referendum did include a recharge program. Essentially about a third of the collected sewage was going to be returned to the ground. The new project, however, does not have a recharge program, so we are less enthusiastic about this construction.

Mr. WRIGHT. What you seem to be saying—and correct me if I misunderstand—is that in your judgment, so long as drinking water all comes from the older, deeper Magothy formation, you see no danger to the public resulting from the discharge of sewage effluent back into the glacial formation.

Mr. GUERRERA. What I am saying is that because of the length of time involved in the movement of water through our formation there is time.

Mr. WRIGHT. With the natural purifying quality of the earth itself?

Mr. GUERRERA. With the quality of the Magothy water on the south shore, the place where we should be building if we want to protect the ground water should be on the middle of the island, not where we are building now.

Mr. AMBRO. Mr. Guerrera, that is a rather startling indictment. Are you saying as well that the result of the secondary treatment plant outflow of, let us say, 30 million gallons a day of fresh water, in the absence of tertiary treatment and recharge that you get a diminution of the quantity of water and intensification of pollution, thereby diminishing the quality of the water, diminution of the pressure barrier, causing salt water intrusion and all matter of all other environmental horrors? Is that what you are suggesting?

Mr. GUERRERA. You used quite a few adjectives, Congressman Ambro; but you make a very strong point in that.

A combination of the discharge from the Cedar Creek sewage plant and the Babylon sewage treatment plant in Suffolk County—the estimates are that will cause a reduction in the water elevation of 6 meters. That is 20 feet. That 20 feet reduction in the water table will cause a shortening of streams, a reduction of stream flow, and, therefore, potential change in the ecology of the Great South Bay because it would change the salinity of the Great South Bay.

So there are some environmental factors that have to be recognized.

Mr. AMBRO. I did not throw in salinity and I did not mean to hit you with adjectives that point so hard. The adverse of that, or the other side of the coin is, are you suggesting as well that by virtue of legislation removing synthetic detergents from use and its effectiveness in implementation that the project which originally was designed to clean up the waters can be either diminished or abandoned and the continuation of septic sewer fields and cesspools will permit the area to have fresh water, clean drinking water? Is that what you are suggesting?

Mr. GUERRERA. Yes.

I am suggesting in the last 5 years the quantity and the quality of the ground water has improved. Since the end of the drought and since the detergent ban went into effect in 1971, the quality of the ground water has improved as evidenced by the quality of the stream flow and we have been measuring the quality of the stream flow continuously since then.

Mr. WRIGHT. If we had another drought, Mr. Guerrera, would that alter your conclusion?

Mr. GUERRERA. Not if we include recharge, because when we discharge this water to the sea, we consume it. If we recharge the water back into the ground, we merely use it and reuse it.

Mr. WRIGHT. You are a professional chemist?

Mr. GUERRERA. Yes.

Mr. WRIGHT. You obviously also have some understanding of geology.

Are there not others in these and similar, and different, disciplines who would disagree with your conclusion?

Mr. GUERRERA. I am not sure I understand what you mean.

Mr. WRIGHT. Let me just try to state it very plainly.

If I understand your contention, it is that by recharging the ground waters with sewage effluent—and I presume you mean untreated sewage effluent——

Mr. GUERRERA. I mean treated sewage effluent.

Mr. WRIGHT. Treated sewage effluent rather than taking it out 25 miles to sea, you would achieve a better result and best perpetuate the longevity of the quality and quantity of drinking water from which this island must draw.

Mr. GUERRERA. Yes. It is directly related.

Mr. WRIGHT. My other question was this: Are there those who disagree with that conclusion?

Mr. GUERRERA. Well, there are those who state that in any event you must have a sewer pipe to the ocean as a vent because sewage treatment plants and people both fail regularly. And there must be some place to put it.

On the other hand, however, there are others who say that that kind of thing can be resolved engineeringwise. In fact, the Federal Government is sponsoring and paying for a research project in the neighboring county to recharge 5 million gallons of effluent. So we are actively investigating just exactly what we are proposing with Federal funds.

Mr. WRIGHT. Thank you.

Mr. AMBRO. Well, Mr. Guerrera, we thank you.

As I read it, Mr. Lambert, the members of the blue ribbon panel, except for Mr. Koppelman, are all here to testify later.

Mr. Noto will testify later.

Who else?

Mr. LAMBERT. Mr. Graner will testify separately, I understand. He is the chief engineer of Suffolk County. Dr. Thompson, who resides in Albany, is not present.

Mr. AMBRO. A question for the record.

Who chose the members of the blue ribbon panel?

Mr. LAMBERT. The presiding officer of the Suffolk County Legislature.

Mr. AMBRO. Can we hear from Mr. Andreoli now?

Mr. ANDREOLI. I would like to use a map that I have here with me, if I may.

First of all, I would like to say I too received that notice yesterday with regard to the panel and I had a debate with myself to see if I should or should not come in here, but as a courtesy to the chairman of the committee I felt we had a responsibility, since we put this report together, to answer any questions.

As to what our disposition is from this point on, I have no idea. I think the chairman stated correctly there is additional work that could very well be done. But we are subject to the presiding officer and I am here simply to answer any questions in the report and I am happy to cooperate in any way I can.

Mr. AMBRO. Well, the status of the panel has no bearing here, official or unofficial. Each of you is an expert in your own way. We are happy to hear your testimony.

Mr. ANDREOLI. I would simply like to point out something for the House committee to consider.

This map mounted on the wall basically represents the Southwest Sewer District. If you notice, there is a green line. This green line basically outlines the legal district that we are discussing.

The pink line that you see is what they refer to as the service area. The line that is somewhat more difficult to see, but is a black line that goes up in that corner and actually goes off the map, is the ultimate drainage area.

Now, in the construction of this district, the design proposes, or the design indicates by these lines the major north-south collectors to be large enough to service the area that is in pink, even though the legal district is the area below that, in green.

We asked the Department of Environmental Control—and Bill Graner was a member of the panel—if he could give us some estimate of what size reductions could be considered if one were only to serve the legal district itself, and he did give us some numbers and indicated that at the very top of these lines we could get reduction from a 48-inch line down to an 8-inch line and a 36 to a 12.

Mr. WRIGHT. Mr. Andreoli, I assume the purpose of initially requiring the larger outflow lines anticipated the possibility or even likelihood that at some future time this other area outside the district might properly be served also.

Mr. ANDREOLI. Absolutely.

Mr. WRIGHT. Now, if that is a reasonable supposition, I suppose it would be unwise to install lines that later would be inadequate to carry the flow.

Mr. ANDREOLI. That is the point I would like the House committee to think about for a moment. I think that proposition is a very valid one. It is a valid proposition to provide a larger collection system to serve an area outside the district, assuming that there was some schedule or some guarantee or some time frame in which this could be accomplished.

Now, that, I think, is an unfortunate part of projects; when we have no mechanism, no time schedule, as to when these facilities actually will be connected.

When you do not have that assurance or when you are not given that kind of assurance, it is good planning to make things larger.

If you are going to dig up a street and you have to put a line in, why not put a larger line in if you know that that line, in fact, will be in service within a given period of time?

Unfortunately, what has happened is that since we have no time frame established here, there is a serious question as to whether the city will ever, in fact, be connected; and that has caused a twofold problem.

Mr. WRIGHT. So that the difference in cost initially is having to be borne by the citizens of the Southwest Sewer District?

Mr. ANDREOLI. That is the point I am trying to make. That initial cost is borne by the legal district.

Now, without any assurance as to when this facility is going to be connected, the entire additional cost borne by the district had the effect that the increased costs within that district have set a climate within the county which has been very detrimental to any other project.

We have areas that need sewers in Port Jefferson and areas of Riverhead, Patchogue. There are other areas in the county that could use sewers simply because the facilities are not adequate to handle. They are high-density areas. They are poor soil areas. All these areas need sewers.

Whenever a proposition in the last few years has been made to try to advance the sewers in these areas, everyone points to the Southwest Sewer District and says, well, who can afford that kind of project?

So I say that without the assurances of knowing that the area in fact that this design was to service is coming into this thing in order to bear its proportion of costs, it has had a reverse effect. Instead of being good planning, in essence, it has a dampening effect.

Mr. WRIGHT. Mr. Andreoli, I think I understand your suggestion. It is that the plan was unnecessarily elaborate.

Mr. ANDREOLI. Unnecessarily elaborate without assurances.

It would have been much better if you had some sort of commitment on the part of the county that, in fact, these people would come into it. There was no time schedule established.

Mr. WRIGHT. Now, if this other area is required to finance prior to coming into the system you are now building, based upon the great disappointments, shock, arising from escalated costs, you might anticipate they would turn down the bond issue.

Mr. ANDREOLI. That is what I am saying.

It has had a ripple effect on dampening things.

Mr. WRIGHT. Which means the citizens of the Southwest Sewer District are loaded with the full cost of the project. An extension of vision might have been splendid except for these intervening factors that make it impossible or unlikely, in your judgment, in the immediate future, for other people to connect their area to the Southwest Sewer District and use it and help pay for the initial installation.

Mr. ANDREOLI. Right.

We have no way of knowing. I think that is the thing the committee should perhaps think about. Everybody turns to Washington to get funds in order to carry on some of these programs and I think perhaps when these funds are made available to communities that, in fact, one should have some sort of a guarantee that the facilities that are being constructed will, in fact, be used within some reasonable period of time.

It is not that the Government is helping finance a project when there is no assurance that it will ever be used, but we are running that kind of a risk here. There is some real question as to when or if ever some of the larger diameter lines we are dealing with will ever, in fact, be serviced to its designed capacity.

Mr. AMBRO. Thank you, Mr. Andreoli.

I might just comment that it is unfortunate that Lee Koppelman is not here because there is an ingredient which lies in a comprehensive plan and a land-use plan which would relate population increases and growth to the kinds of needs that might occur with respect to sewers.

Indeed you point up high density areas throughout this large county that might right now be in need of sewers. Then, of course, there are others who advocate imminent growth policies which make population stable, which might mean that we would not need the kind of ambitious program that would have us tie into the larger lines.

So that line of questioning, however, has been effectively—I hate to use the word—aborted by his actions.

In any event, we will try to develop that in some other way later on.

Mr. Tweedy, would you like to say something?

Mr. TWEEDY. Thank you.

Mr. Wright, Mr. Ambro, at the time of the outset of this committee we asked for copies of the consultant's contract and the insurance certificates. We received the consultants' contracts, but we did not receive any certificates of insurance.

Roughly speaking, as pointed out in the report, the contracts fall into five basic contracts. One is a design contract that was entered into by the Department of Public Works where the payment is to be made as a percentage of construction costs.

The second one was the design contracts for laterals and interceptors entered into by the Department of Environmental Control. Again, the fee to be paid is a percentage of contract cost.

The third is a special service contract for laterals and interceptors, payment to be made as a multiplier. That is, payroll times a factor which euphemistically could be called a plus contract.

The fourth and fifth types are the sewer outfall type and the sewage treatment plant where the same contract contains both the design and the special services portions of the contract, the design portion being paid for by a percentage of construction costs, special services contract being paid for by multiplier of cost plus type contract.

Now, as I say, we have never received the coverage certificates of insurance. While it is true that within the body of the contract it does call for the consultants to hold the county of Suffolk harmless from all suits, lawsuits, what have you, one must realize that these consultants are individuals, partnerships, and/or a hybrid corporation, which is called a professional corporation, which means that they have limited access.

Since we did not have the certificates of insurance and they were not provided to us, we can only read the insurance clauses as they existed in the contract. As the insurance clauses exist in the contract it does not call for what is called comprehensive professional liability or euphemistically errors and omissions, insurance which would cover Suffolk County, New York State, and the United States from losses by the reserves of an insurance carrier.

Mr. WRIGHT. Are you saying, Mr. Tweedy, that the contracts are to protect the public interest and that they are less protective of the public interest than normal contracts entered into in projects of this kind?

Mr. TWEEDY. I do not know. I can just say what we have found.

Mr. WRIGHT. You are a professional engineer?

Mr. TWEEDY. Yes, sir.

Mr. WRIGHT. You enter into contracts?

Mr. TWEEDY. Yes, sir.

Mr. WRIGHT. You have entered into contracts with public bodies?

Mr. TWEEDY. No, sir, I have not.

Mr. WRIGHT. I see. All right.

From that standpoint then you really do not have any basis for comparison?

Mr. TWEEDY. No, sir.

I would say in all probability if we did see the certificates of insurance there was some sort of a comprehensive professional liability. We did not see the certificates so we were not able to look into it.

Mr. WRIGHT. Mr. Chairman, I think the county office would have some testimony later today with respect to this.

Mr. TWEEDY. Now I would like to direct your attention to exhibit 15, which is a report of the U.S. Geological Survey.

When the Southwest Sewer District is in operation as now designed without recharge of ground water or stream augmentation, the ground water in Suffolk County and Nassau County will be reduced from 1 to 5 meters, or 4 to 17 feet. In the area of the Southwest Sewer District, it appears about 3 to 4 meters or 9 to 12 feet.

Exhibit 26 is a letter from the Suffolk County Department of Public Works Commissioner to County Legislator Donahue, replying to a complaint wherein the commissioner states categorically, based upon data of the Suffolk County Department of Environmental Control there will not be any water left in the lakes, streams, et cetera, of the Southwest Sewer District.

If this is true, we are faced with two types of complaints from citizens. The first would be an ecological environmental complaint with the loss of lakes, ponds, streams, marshes, et cetera, the interruption of the food chain, and the resultant change in the salt content of the Great South Bay could affect the clamming and fishing industry. This is besides the very real loss of recreational areas and lakefront and riverfront properties where they do exist.

From an engineering point of view, the lowering of the groundwater by that amount could have an effect on the bearing capacity of the soil with a possible resultant differential settlement that could cause stress in various structures, that probably would show up as cracking, which at best is a nuisance an at worst a problem.

Again we bring this to your attention only to illuminate the possibilities of areas of conflict.

We found that some clauses of both the design contract and the special service contract are overlapping, which could cause possible doubling of costs to the county, which by extension means the United States and New York State. There are times where the design and special service contracts are held by the same firm. This leaves areas where costs should be borne by the design phase of the contract, which is paid for by a percentage of construction costs and could instead be assigned to the special service contract, which is really cost-plus.

We direct your attention to exhibit 24, which is a letter from the Suffolk County Controller, Mr. Claussen, wherein he states that he has audited Suffolk County Department of Environmental Control, but

he does not have the authority to audit the consultants, since the decision as to the payment of consultants is discretionary with the Commissioner of the Department of Environmental Control.

We also respectfully direct your attention to exhibit 23, which is a report from the audit conducted by the New York State Comptroller, Arthur Levitt, again complaining of lack of cost control and audit authority.

If we may make a statement, Mr. Levitt's audit was subsequent to our findings.

Mr. WRIGHT. Mr. Tweedy, of this approximately $611 million now estimated as the cost of construction of the project, not the cost of planning, but the cost of the construction of the project, what part of that, according to your inquiry, has gone to the consulting firm?

Mr. TWEEDY. The fee is being paid on the basis of a fee curve developed by the American Society of Civil Engineers and, as I remember, it is somewhere around 5.4 or 5.5 percent of construction cost. That is only the design phase, Mr. Wright.

Now, based upon that, you could say it is going to be $30 million to $40 million design engineering cost. And the special service cost—I would have absolutely no idea of that.

Mr. WRIGHT. $30 million to $40 million in design?

Mr. TWEEDY. Yes, sir.

Mr. WRIGHT. Here, Mr. Chairman, is something that strikes me as alarming, to say the least.

Initially we were thinking in terms of $265 million. Now we are talking about $611 million.

Mr. LAMBERT. Originally it was $291 million. Now it is $640 million, which has been appropriated, and $611 million is the latest estimate for actual construction cost.

Mr. WRIGHT. Now, you referred to it earlier, Mr. Lambert, as a $1.48 billion project, and I am sure what you are conting there is interest.

Mr. LAMBERT. That is interest; yes.

Mr. WRIGHT. If I figure you right, on a 35-year amortization schedule I understand the bank grosses 8.9 percent interest.

Mr. LAMBERT. That opens up a whole new area of inquiry.

We have been paying exorbitant interest rates. I am sure this is not the area right now for this particular committee, but the latest $150 million issue brought an 8.91 percent rate.

Mr. WRIGHT. It might not be an area of inquiry for your committee, but it is for this committee.

Mr. LAMBERT. It certainly is an area of inquiry as a legislator, but not this particular committee.

Mr. WRIGHT. Here is what I am worried about.

I am worried about what the people have to pay. If we are talking in terms of a $611 million project, if my calculations are roughly correct, over 35 years they are going to be paying about $900 million in interest for which they are not getting another nickel's worth of project or service.

Mr. LAMBERT. That's right.

Mr. WRIGHT. The people of the United States are supposed to be putting up this money to help you clean up the water, not to pay the bankers' interest. That is the purpose of it.

Now, look here.

If I am right, for every $2 that we are spending to improve the water quality, presumably by building a sewerage system, there is another $3, for a total of $5, that a citizen is going to have to pay.

In other words, the citizen is going to have to pay $5 for every $2 worth, assuming we are getting our money's worth in the first place, in construction. They are going to have to pay $5 for every $2 worth of sewage treatment we have. That to me is appalling.

Mr. LAMBERT. I share your views.

Mr. WRIGHT. You used the word ripoff somewhere in your testimony and there is a ripoff right there. The people in this area are going to have to be paying that and the people of the United States are going to have to be paying that. They are not getting any more sewerage for it.

Mr. LAMBERT. I fully agree with you, 100 percent. The Southwest Sewer District is a real find for the investment community.

Mr. WRIGHT. Thank you, Mr. Chairman.

Mr. AMBRO. Thank you.

I have a comment and just two questions and then maybe we can move on.

First of all, Mr. Tweedy, we have a comprehensive interim report on the extent of the audit procedures in the project. One of the contracts, as I understand it, permits the consultant to subcontract and then tack on a 10-percent surcharge to the charges passed on to the county.

Have you come across that?

Mr. TWEEDY. Yes.

Mr. AMBRO. That is a usual practice?

Mr. TWEEDY. It is not unusual.

Mr. AMBRO. Not unusual?

Mr. TWEEDY. Not unusual at all.

The percentage of tackon is negotiable, but it is not unusual at all.

Mr. AMBRO. Mr. Andreoli, how much money do you estimate could be saved if you reduced the size of the interceptors?

Do you have any dollar figure?

Mr. ANDREOLI. No; I do not.

Part of the charge of the committee was to look at this project and see what some of the alternates might be to serve only the legal district rather than go into the approach that has been made of serving the service district, which again is substantially less than the ultimate drainage area, what alternates could be considered; and in the report we did list them.

Unfortunately, we never got to the point of trying to put any dollar value on the savings that these changes might, in fact, provide.

If we are talking in terms of the major north-south connectors, only 50 percent or so of those are in. So there was some area of movement there.

If we are talking about the east-west major connector, 95 percent of that has not been put in. The outfall has not been put in.

So these are some of the areas where we felt there were some options still available if one wanted to pursue it. We did cite them in our report.

Mr. LAMBERT. Mr. Ambro, Dr. Andreoli mentioned unfortunately we had no estimate. We had requested and been promised on numer-

ous occasions, as you will see from the exhibits to the report, from the Department of Environmental Control we were promised cost estimates on the savings. Such figures have not been forthcoming.

Now, we had recommended, as you know, as I said at the outset, a three-pronged action to be taken in order for us to move forward and investigate in greater depth.

One of those was an independent study by an outside, totally independent consortium of engineers, to be selected by a joint committee consisting of ourselves in the blue ribbon committee plus the 208 study group. That resolution was defeated on July 20.

Now, I have reintroduced such a resolution which is coming for action on Tuesday. At the same time the county executive and the presiding officer have a joint resolution which they have introduced which would select independent engineers or an engineering firm, to be selected by the county executive and the principal architects of this particular project.

I just wanted to bring that to your attention.

Such a resolution is the fox in the chicken coop, and the hound watching the pork chop, and that is what we are faced with at the moment.

Mr. AMBRO. Mr. Lambert, Mr. Andreoli, Mr. Guerrera, and Mr. Tweedy, I and Mr. Wright and the staff appreciate your appearance. The testimony is so quantitative and so interesting; without question we ran over, but we do have many people who, as well, must testify and provide their testimony for the record; so we thank you for coming and appreciate it.

Mr. LAMBERT. Thank you.

Might I say in closing if there is any further information that you desire from us we would be more than delighted to either appear personally or communicate with you in writing.

Mr. AMBRO. Thank you.

Mr. AMBRO. I would like to call up Bob Mrazek, who is a county legislator and is as well chairman of the county legislature's finance committee.

Is Mr. Mrazek here?

While Mr. Mrazek is coming up, I might say that I have known Mr. Mrazek a long time. He worked for me as an aide while I was supervisor in the town of Huntington. How he got elected as a result of that experience is beyond me but in any event, he is here. He has been prominent in the headlines lately.

He will discuss with us the impact of the project on the local community, the problems encountered with the engineering construction and design of the project.

TESTIMONY OF HON. ROBERT J. MRAZEK, COUNTY LEGISLATOR AND CHAIRMAN, COUNTY LEGISLATURE FINANCE COMMITTEE

Mr. MRAZEK. Mr. Chairman, Congressman Ambro, I am happy to be invited here today to talk to you about some of the things that I have been involved with in regard to the southwest sewer district as chairman of the finance committee.

I would just indicate that my involvement is that of someone who is not a legislator from the Southwest Sewer District and is derived largely from some communications I received shortly after being

elected, which were anonymous, I might add, which alleged various criminal wrongdoing and substantial misappropriation of money within the Southwest Sewer District.

It was a rather amorphous statement. There were very few details in it. But along with the rather disquieting things one reads about in relation to the Southwest Sewer District, it prompted me to look into certain areas that I would like to talk to you about at least briefly.

I think it would be pertinent to you since your perspective on this is a Federal one and I think you have to rely largely on local municipalities to make sure that the decisionmaking that takes place and the expenditure of Federal dollars as well as State dollars is based on fair and wise and judicial constraints.

I think that it is important to look at how we got started on this thing back in the mid sixties when County Executive Dennison deemed there was a need for a Southwest Sewer District. He actually did not call it the Southwest Sewer District at that time, but there was a need for sewering in the southwest portion of Suffolk County, and a committee on consultants was developed to look at the possibilities of who to hire to make a comprehensive study of those specific needs.

At that time the committee came up with approximately 75 consultants who were interested in bidding on that particular work. They were each asked to fill out a rather lengthy questionnaire in terms of all of the projects that they had been involved in and, in particular, the kinds of work that they had an expertise in.

One of the first firms that was thrown out for consideration was the small consulting firm called Bowe, Albertson at that time. They narrowed that 75-name list down to approximately 10 finalists, all of whom were rather large consulting firms that had significant experience in all areas of waste treatment.

To indicate how politicized this became right from the start, the board of supervisors at that time produced a name and that consultant was Bowe, Albertson, and they then went ahead and did the comprehensive studies and have since been hired to do—I do not know if I should use the specific percentage—but certainly the vast majority of all of the engineering design work in the Southwest Sewer District as well as the field inspection on all of the construction activity that has gone on in the Southwest Sewer District.

You have just listened to Mr. Tweedy talk about some of the contracts. I have also looked rather seriously into that particular area, starting back in February.

I contacted Mr. Joseph Miller of the city of New York who has negotiated for Mr. Samowitz hundreds of millions of dollars in sewer contracts.

I contacted the office of the commissioner of Public Works for Nassau County as well as people in Westchester County.

We had a subcommittee of the Finance Committee looking at this. We had Mr. Caspe from the EPA and he indicated to us the three toughest negotiators in this region are the city of New York, Westchester County, and Nassau County.

I thought that perhaps since we had based most of our construction practices, according to Commissioner Flynn, on the work already done in Nassau County, that perhaps we might have also based our contractual practices on some of the wise policies employed by our neighboring municipalities.

Specifically, I think our contracts in Suffolk County are rather unique in terms of their being totally open ended from a design standpoint and where we appear to have finished our negotiation just about any other municipality in the United States of America starts their negotiations.

Our contracts and terms of most of the interceptor work adhere to the ASCE curve, which is the more difficult. Mr. Tweedy was unable to find any other municipality in the United States of America that pays according to the ASCE curve. The American Society of Civil Engineers itself has indicated that that is a starting point for negotiations, but we end up paying according to that ASCE curve and it has resulted in obscene profits, absolutely outrageous profits, for the consulting engineer, the major consulting engineers, as well as the others that have been paid according to that scale as well.

Just to give you a couple of indications of how bad a situation we are in from that standpoint, from a cost accountability standpoint, I talked to the consulting engineering firm of Tippitts, Abbott, McCarthy & Stranton in New York City. They did the design work on the North River treatment plant on the Hudson River.

This was done in approximately the same time frame as the Southwest Sewer District treatment project, some of its work starting in 1969. Their negotiated design fee—this is the city of New York—was 3.3 percent and the cost was not to exceed $4,650,000 for their work on that project.

In 1973, the firm was forced to go to the comptroller of the city of New York because they felt they would be losing so much money on the deal because of the complexity of the work that they would be unable to finish it. They renegotiated that contract with the comptroller's office and received a total additional design fee of $1,700,000. Their total engineering fee for the North River treatment plant was $6,350,000, and based on the total construction cost, that worked out to 1.27 percent.

If we in Suffolk County had been using our contractual policy to hire that firm or any other engineer, if we continue to pay at the rate we have been paying, all our consultation figures would have been paid at 5.32 percent on the ASCE professional curve, which would have yielded a profit four times what the city of New York paid their engineers for a negotiated contract.

If we were to compare our fees with Nassau County's and in specific their contract for an outfall pipe and treatment plant, it turns out that they paid half of what we will pay, assuming that we committed ourselves and continue with the 5.23 percent on the ASCE curve.

I might add that that particular practice has been outlawed now by the EPA under its guidelines developed in December of 1975.

But needless to say, all of our design work prior to that was based on the ASCE curve, which is unique.

I might ask you to look briefly at the three contracts that I think I submitted to the special committee and which I believe are incorporated or at least the Suffolk County contract I guess is incorporated in their special report. It would be useful to compare our special service contract and for you to compare it perhaps with the special service contracts used by the city of New York as well as the county of Nassau.

Our compensation under special services indicates that payment shall be computed at two times the salary cost of the personnel involved. In Nassau County, it is 2.2 times. In the city of New York, it is 2.2 times. That is, the technical salary costs.

But what is interesting is that the contract for the city of New York stipulates that salary costs shall be limited.

Now, we are talking about specifically what salary means. When you go to 2.2 times salary costs it shall be limited to direct payroll of technical and professional employees for time spent on the project and shall not include amounts for vacation or holiday pay or other fringe benefits.

It also goes on to payment for principals and very specifically goes into great detail as to how certified time sheets have to be used to justify work done on the special services portion of the conract.

Interestingly enough, Suffolk County, which computes at two times the salary cost of the personnel involved in the contract, includes reimbursement for actual travel and subsistence expense and field expense. It includes the salary paid, allowing for employment compensation, insurance, retirement benefits, and medical insurance benefits.

I might add that the employees of Bowe, Walsh pay for half of their medical benefits, but this is used as a multiplier to double the salary cost for their personnel involved, and it also results in an absolutely outrageous cost for the people we are paying on that contract.

Mr. AMBRO. Does that makeup for the difference?

Mr. MRAZEK. Absolutely.

Mr. AMBRO. Could you venture a guess as to what in a percentage figure that would result in if balanced against, let us say, the 2.2 in Nassau and New York City?

Mr. MRAZEK. I believe it is close to 3. I believe it is between 2.8 and 3.

Mr. Shapiro is here, who is the accountant, and he can confirm that for you later.

Mr. WRIGHT. In addition to that, this particular matter will be covered or touched upon with the testimony we will receive later.

Mr. MRAZEK. I certainly would hope you would ask some hard questions with regard to how our contracts were negotiated.

I also at that time looked into the quality of the construction, based on looking at one contract, which was the first interceptor pipe that went into the ground. There has been a good deal of controversy about some of the results that I have released in relation to my conclusions about the quality of construction at that time.

I am talking particularly about one of the major north-south interceptors, a section of that interceptor. It was the first one that went into the ground.

In examining a lot of the documentation that was in the Department of Environmental Control for that particular contract, it appears that the involvement by the Suffolk County Department of Environmental Control at that time was minimal, if there was any. It appears that there are a lot of defects in that particular stretch of pipe.

I would submit to you—and I believe Mr. Kopecky already has a copy of this—there are 503 defects in that one length of interceptor pipe, according to manhole location.

In addition to that, this particular length of pipe, as well as the truck sewers that go along with this particular interceptor, 107(a) through 107(g), I believe indicate that in putting this pipe into the ground and laying it they did not lay the pipe—this is a rather complicated question and I am not an engineer, but I will just try to explain it to you briefly.

The State approves a certain slope for the pipe in terms of providing an adequate flow which is, according to a formula, 2 feet per second flow. It appears that a substantial portion of this pipe was laid at below those slope designs approved by New York State.

On one particular trunk sewer, 100 percent of that sewerline was installed at below the design slope approved by New York State.

On top of that, 10 States got together to develop minimum guidelines for slope. New York participated with that conference in 1971 to develop certain minimal standards for slope. It appears that substantial portions of this same pipe are below the minimal permissible standards, guidelines, for slope. That same trunkline, 107(a), is 100 percent below the minimum permissible guidelines for slope, which seems to indicate that you will have less than the original design life for this particular line because of certain problems of flow that will create the problems of anaerobic decomposition over the years of life that the pipe has.

Now, it seems to me that since that time the Department of Environmental Control has geared up really to meet the challenge and has improved the quality of construction so at least, on the judgments that I have been able to develop with engineers who have been helping me, the quality of engineering now is not only very satisfactory, but excellent.

I am not going to attest to that for the whole project, but in certain areas since that time that were looked into, the quality does appear to be good.

But at this particular time—and this is the first year and a half of the project—as a typical example, the drawings showing how the pipe went into the ground were not even delivered to the Department of Environmental Control until more than a year after the pipe was buried. We were totally dependent upon the consulting engineer for his expertise in making sure we got a good job and we got what we paid for.

I would submit that that is not really a very effective cost-control procedure, and a procedure which, I think, yielded some rather dismal prospects from an engineering standpoint for the future in terms of the work that was done at that time.

I want to go into an area involving the quality of the reports that we received. Some of the reports and some of the contracts that we got into in relation to our consulting engineer, in particular one of our recent contracts over zone 7 laterals, I would very much hope that you would study in any kind of an audit, because they have yielded for our major consulting engineer—Bowe, Walsh—rather outlandish profits—$500,000 for a preliminary report that a high school student could have written in a couple of weeks.

I do not say that loosely.

I think you should talk to the other consultants for whom this preliminary report was prepared and for which they received 25 per-

cent of the design fee off the top. There were three other consultants who were working with Bowe, Walsh, in this particular area. Bowe, Walsh did the preliminary design work for all of them and much of the remaining work then was left up, of course, to the three other consultants to do; but they took their $500,000 off the top for doing the preliminary work.

I just want to conclude by saying that I think one of the most elemental and tragic mistakes—and Chairman Wright, you alluded to it briefly before—was the financing of this particular project. I think it is fair to say that the county executive back in 1972 gambled with public money and the county legislature, in totally abrogating its responsibilities to oversee the way that money was spent, allowed this to happen and it has resulted in hundreds of millions of dollars in additional interest.

I have talked to municipal bond people in New York City who indicate to me that arbitrage, the strategy of playing for arbitrage, back in the early 1970's when the banks were hungry and we were receiving 10 to 12 percent on our certificates of deposit and we were paying between 5½ and 6 percent for long-term money, that a lot of municipalities played that market.

They went with short-term borrowing and they earned additional money between the certificates of deposit and the amount they were paying for the paper.

But I think one of the elemental mistakes here was that we are talking about a project that was expected to go on in duration for 5 or 6 years. Eight years, excuse me.

It appears that very few municipalities played the arbitrage market unless they were dealing with a construction project that perhaps took a year's time to construct.

In Suffolk County, of course, we played the arbitrage market right up to the time the market turned. We did not have a conservative financial plan developed back in 1971 and 1972, which was suggested by several county legislators at that time, a conservative fiscal plan that would have allowed a long-term bonding out at that time, beginning at that time, for all of the bond obligations that were going to have to be bonded out during the life of the project.

Instead, we played that arbitrage market right up to the end and here the difference was only a half a point. We were paying about 6 percent on the long-term paper and we were paying about 5½ percent on the short-term paper and for that additional half a point we are now going to pay hundreds of millions of dollars of additional interest.

I think perhaps that is the major reason we are in the position we are now as far as interest goes and why the banks have us by the short hairs.

Mr. WRIGHT. Mr. Mrazek, at this point, quite obviously the greatest part of the money that the citizens are going to have to pay is not for the sewer project.

Mr. MRAZEK. No; it is not.

Mr. WRIGHT. Three-fifths of all the money that is going to be paid is going to pay for interest; 8.9 percent.

A person can get 8.9 percent return on a Government guaranteed obligation behind which is the full faith and credit of the United States and not have to pay any tax on it. That is outrageous, in my judgment.

Mr. MRAZEK. I might add that we largely created this situation ourselves.

We have to pay off $455 million between August 1976, and August 1977. That is our obligation. That is instead of paying off $50 million a year at a reasonable interest rate.

They know where we stand and it is in a bad position.

Mr. WRIGHT. Of course, that is a situation which to some degree, as you suggest, might have been altered by more prudent placement of the bonds locally.

Let us face it. The situation was brought about by these outrageous interest markets throughout the United States, which have robbed communities all over the United States.

Mr. MRAZEK. I submit, Mr. Chairman, when we started this project we could have bonded those for the first 4 or 5 years of the project. We could have bonded out at between 6 and 7 percent.

Mr. WRIGHT. How much money is it going to cost the average homeowner here in the Southwest Sewer District area?

Mr. MRAZEK. Well, the commitment in the original program was for 60 cents per hundred of full value. Now, it appears that since this is already going to cause an economic blight in the Southwest Sewer District—and this will happen unquestionably—whatever happens and whatever decisions I think we, as public officials, make in this regard—it has been recognized that the people within the Southwest Sewer District cannot afford to pay for it any more at 60 cents per hundred of full value.

Therefore, the county legislature decided to spread the cost of the sewer district out countywide and recently made a decision that would allow the county executive in the event that deficits are created over and above that 60 cents per hundred figure, these would be made up by pledging 1 cent of our existing sales tax in Suffolk County to pay for the southwest sewer district bond.

Under our latest prospectus, it is projected that over $400 million in additional deficits will have to be spread out throughout Suffolk County for the rest of the people in Suffolk County to pay for it, which, I might add, I think is illegal, because I do not see how all of Suffolk County can be charged for a special district, particularly when we all have our own special sewer districts to pay for.

Mr. WRIGHT. Do you have a ball-park figure for the annual cost to the average homeowner?

Mr. MRAZEK. Well, if they maintain a 60 cents per hundred full value figure and if you work it on the basis of a $40,000 home, I think you can multiply it out yourself. It all depends upon the growth of the tax base, I suppose, what sewers are connected.

Mr. WRIGHT. Is there not also a connection fee?

Mr. MRAZEK. There have been figures bandied about which run from $800 to $1,200 for an initial fee.

Mr. WRIGHT. In the beginning?

Mr. MRAZEK. That is right. It is a one-time charge.

Of course, this is rather disastrous considering we are dealing with the lowest per capita income area in Suffolk County where you have a very significant senior citizen population. Only a one-time charge of $800 to $1,200 is rather difficult to meet. It is one of the reasons why you are seeing wholesale sales now of property in the Southwest Sewer District, I think.

Mr. AMBRO. A good deal of what you have said is very direct, frank and strong, and the result of an in-depth investigation by you and a concern and certainly history is something that we have to look at.

I might interject that I was on the County Board of Supervisors before you became one of the first legislative bodies in history to do away with it and create the present county legislature.

There were two of us who opposed the Southwest Sewer District. Our main concern was that eventually indeed all of the taxpayers of Suffolk County would be brought into it in some way, to finance costs.

In any event, there are environmental considerations. The public spoke in the referendum and here we are.

What have you say, as a summary, in view of all of the work you have done, all of the things you have uncovered, the testimony you have given, would be your present bottom-line recommendation?

Where are we?

What would you like to see done?

Mr. MRAZEK. It is such a monumental question I would have to try to pin you down.

Mr. AMBRO. In a few words.

Mr. MRAZEK. I do not know.

You know, I listen to people who tell me that from an ecological standpoint we are causing more damage than solving problems by even finishing the Southwest Sewer District. I just find myself totally incapable of making judgments in that area.

I do think that as far as a recommendation, the type of contractual policies for future public works projects, at least in Suffolk County, will be fundamentally changed as a result of a lot of the questions that have been raised by this blue ribbon technical committee and others. I think at least for the near future, the way that we do business generally on public works projects and fund these projects out will hopefully be improved.

But these are such minor victories. I might add we also approved a public disclosure law for everybody providing goods and services to Suffolk County, which I think will reduce perhaps some of the cronyism that has gone into the way we let contracts, particularly service contracts, in this county.

Mr. AMBRO. One of your recommendations includes a reevaluation in the Federal formula in order to provide additional moneys to underwrite the project and thereby diminish the already impressive impact on local taxpayers?

Mr. MRAZEK. Yes.

I think we are all hoping for that. We are all hoping that the 55-percent figure will be maintained under the 1965 program and I gather from a letter that Commissioner Flynn gave me—are you shaking your head no?

Mr. AMBRO. I will tell you about that in a minute.

Mr. MRAZEK. I gather that Mr. Salkie from the EPA has indicated that perhaps we have an opportunity to pick up an additional 20 percent above and beyond the 55 percent, so that even though we are presently being funded at 38.9, an additional 20 percent would bring us up to approximately where we would have been if we received the original 55 percent under the 1965 program.

Mr. WRIGHT. Mr. Chairman, I suppose maybe we ought to comment to some degree on that.

The moneys authorized by the committee on which Mr. Ambro and I serve—we authorized $18 billion for a crash program of 3 years. We anticipated that all that $18 billion would actually get out into the stream to build the sewage treatment. It did not happen, unfortunately. That law was passed in 1972.

In 1975, only $1.7 billion, 9 percent of the money that we had authorized for this crash program, had actually got out into the hands of municipalities.

There are a variety of explanations and reasons for that.

One of them is, of course, the fact that the Congress did not appropriate annually the total amounts we had authorized because the administering agency would come before the Appropriations Committee each year and they would say, well, all we can obligate this year is so much.

Additionally, there were the impoundments under President Nixon. Then Congress passed a law outlawing the impoundments.

Subsequently, we still have not been able to find a way to streamline procedures within the administration of the program sufficient to get out into the hands of the municipalities as much as half the amount we make available for obligation.

I do not know what it is, but we are searching for what it is. For me to sit here or Mr. Ambro to encourage you that we are going to be able to get more money to you, a greater percentage of the share to you, might be raising false hopes. I just do not want to do that.

But we have a bill right now that may be of some help in some respects in a conference committee between the House and the Senate. We had our second meeting yesterday evening. It lasted until about 7:30. The bill emanates from the committee on which Mr. Ambro and I serve. It contains several provisions which conceivably might be helpful in this situation, if those provisions are accepted in the final version and they are signed into law.

Section 8 of that bill provides sufficient authorizations to completely reimburse a lot of eligible projects which have gone out on their own and expended local moneys in advance of the receipt of Federal funds to which they would be entitled.

Section 12 of the bill deals with State certification and it gives States money for onsite inspections and audits, which might present problems in the future.

There is in the House bill a loan guarantee. The Federal Financing Bank would make available to the grantee money for the non-Federal share at reasonable rates of interest. I do not know because I have not anticipated this particular situation, but I should hope that that money might be made available to a local government which already is going to have to pay an exorbitant amount of interest to pay off bonds.

Mr. MRAZEK. I am rather distressed to report that the first $150 million that went out are uncallable.

Mr. WRIGHT. Uncallable?

Mr. MRAZEK. We are stuck with those.

Also I do not know if everyone else has been made to pay in the same way.

Yes. They are uncallable.

Mr. WRIGHT. Well, somebody is getting rich off this thing and it darned sure is not the citizen out here who is going to be paying $2,400 a year if he has a $40,000 house.

Mr. MRAZEK. I am sorry.

Mr. WRIGHT. I say somebody is going to get rich or make a lot of money off this project, and it certainly is not going to be the homeowner, the citizen out here, who at 6 percent of $40,000 is going to be paying $2,400 a year.

Mr. MRAZEK. No. I think it is about $240.

Over and above that, you have the rest of your property taxes. That is for sure.

Mr. WRIGHT. There are two or three things of that kind we are trying to do.

There are projects all over the country, not quite like this, but there are projects that are scrambling with the limited amount of money that is available; and we could have a higher share of Federal costs.

I am just not prepared to encourage you in that anticipation. I am not saying that it is impossible or it cannot happen. I would not want to lead you to a false expectation.

Mr. MRAZEK. I only hope in the future we take advantage of every opportunity the Congress offers us.

Mr. AMBRO. When the EPA gets here we will talk to them about their letter and the additional 20-percent reimbursement under Public Law 92–500. Maybe we will get some other facts before you that might or might not give you hope with respect to the financing.

But in any event, I would like to thank you deeply for your coming here and your testimony and all of the work you have done thus far.

Mr. WRIGHT. Mr. Chairman, I would like to join that and express my appreciation to Mr. Mrazek for the very lucid and elucidating information you have given us.

Mr. MRAZEK. Thank you, Mr. Chairman.

Mr. AMBRO. I would like to call Mr. Anthony Noto, who is as well a Suffolk County legislator and also serves on the finance committee.

Mr. Noto, welcome.

TESTIMONY OF HON. ANTHONY NOTO, COUNTY LEGISLATOR, MEMBER, FINANCE COMMITTEE

Mr. NOTO. It is nice to see you again.

I want to compliment you for the first time I got in contact with you in Washington. It was a Sunday and you were working on Sunday, which pleased me very much.

It is going to be difficult to try to go over 7 years of sewer problems in a couple of moments, and I know your time is valuable.

There have been several areas that my colleagues have commented upon and I am not here to rebut my colleagues.

It was indicated there were noncallable bonds, Unfortunately, Mr. Mrazek is not right. There is a 10-year clause. We can have the bonds callable.

As to fighting some of the inflationary periods, if we have moneys that we can get made available from the Federal Government we can buy our own bonds if we have to insure that lower rate of the overall package.

But the basis of my presentation today is concerning the reevaluation of the Southwest Sewer District.

From the beginning, as a member of the county legislature, I had to argue and more or less have been accused of ranting and raving over the years concerning the financial problem in the Southwest Sewer District, never the technical part. I am not an engineer. I am not an attorney. I have never professed to be one.

What I have said is that the people that I represent cannot afford the Southwest Sewer District, which was given to them.

The original cost was estimated back in 1968 and the people voted for it and passed it. We have to start from there.

It is a project mandated by the people through an election process. We must meet our commitment to the people.

I am not a legislator who is going to indicate that, or tell the people that they are going to pay only for $291 million of work in the ground to start the project and, therefore, lose our State and Federal aid which we have been threatened with and have them pay the whole entire burden.

But in a dilemma it is a situation where the escalation has to be met. The project has to be met head on and as much as we may dislike it, we must do it because the people cannot afford to pay that type of money for something they would not receive in returning services.

We talked about a moratorium and for 2, 3, 4, 5, 6 months, there is no such animal as a moratorium in that period of time to get an evaluation.

Your own government as well as the State government says to us, me as a layman, that if you do this, you are jeopardizing any future aid. If you do this, you might not receive the commitments that we have scheduled for you.

So it makes it even more difficult for a local elected official to make a decision.

They say to us if you cut down the size of the pipes, if you cut down the dimensions and the drainage area, if you entertain that thought, you must come up with a cost effectiveness approach and if it does not meet with what we say, we are not going to approve it and then again possibly lose the aid that was possibly committed to us up until 1977.

There are so many ifs; there are so many problems, and, unfortunately, we are dealing with too many levels of government. I think this is where a lot of the problems are.

When this bill and this project came into effect nobody bothered to check to see that the State finance law says that we have to take your dollars that you give us and the State gives us and use it for debt service. It is absolutely amazing that none of us really knows what one imposes on the other.

These are the problems that we have with governments, I always call them big brother governments.

The project starts with a great idea, but somewhere along the line we do not get the necessary backup staff on all levels of government to investigate to see the problems that we have created for ourselves.

When the State financial law states that for every dollar I take of the money you give me and put it against the capital cost of the project, that is one less dollar I have available to bonding; what it

is saying is, gentlemen, I must bond the full project. If I do not bond it, that is less Federal aid and State aid I will receive.

The other forms of government, the upper levels of government do not award us for being cost effective if, in fact, we follow cost effective planning.

Those are just some of the things.

I am not rebutting my colleagues, but they have to be said. They probably will be said later on.

I want you to understand as a local elected representative I do understand that.

Mr. AMBRO. Mr. Noto, you have as a result of your responsibilities which come with public office as well, a great influence and power.

I would like to ask you, in view of the fact that we all recognize that there is considerable criticism of this project, both with respect to its financing, lack of funds available, high costs, quality of construction, environmental impact—this is the same question I asked Mr. Mrazek—what, as a result of your view of this and your time in the county legislature, would you recommend at this point in time, given the physical fact that there has been work done in the Southwest Sewer District?

Mr. NOTO. Well, I believe that the project has to be completed because I just cannot believe we can charge the people, tax the people for something they cannot use. I believe we must seek additional State and Federal aid.

The county has allowed the Southwest Sewer District 1 percent of its sales tax against its bond obligation and the reason for that has been explained. It is that we had to pledge this because the bond market demanded it.

Well, that is fine for me because I am in the Southwest Sewer District or should say 60 percent of my district is and 40 percent is not. For the people who are in it, it is excellent; it is an excellent idea, because the county gets a little involved with the cost.

What has happened here is that the bond market has demanded it not because the Southwest Sewer District was going bankrupt, but because they are county bonds. They are not district bonds. They are county bonds pledged back in 1969. The district does not have the ability to bond itself.

So what happens here, unless I lose the interpretation, the county was already on the brink of default. The county of Suffolk had $112 million rolling over in BAN's with only $114 million in the total treasury. So if the banks demanded that money, the county was broke, closed, shot completely, with less than $2 million to operate for the full year. Every job, every person in the county would be laid off. Every function, every health center, everything would have been closed. So the county buckled under the pressure to the bonding people to insert that 1 percent.

Yes. The Southwest Sewer District will benefit by it, but so did Suffolk County, because had we defaulted, this county defaulted, the consequential damages would have been tremendous in the amount of interest this county would have to pay for 25, 30 years.

Mr. AMBRO. Based on the history of the sales tax in this county, what is it anticipated that 1 percent will bring in annually?

Mr. NOTO. At this point, between $37 and $38 million, but I feel in years to come, because of inflationary pricing and so on, that there will be more money coming up, maybe up as far as $42 million.

You must understand this does not take effect until between 1981 and 1983, and this money is going to go for debt services so that the people could possibly maintain their homes at 60 cents per hundred value. If this tax did not go in, gentlemen, the people in that district would have had to pay $1.38 per hundred. A $40,000 home would have been paying about $525 a year, not counting the $50 for maintenance, the annual fee.

So it was a necessary evil, not only to, say, the Southwest Sewer District, but also to save Suffolk County.

Mr. WRIGHT. We keep talking, Mr. Noto, about a $40,000 home, so let us use that as a median line.

I misunderstood something that was said earlier. I grossly misunderstood. I thought someone said 6 percent. They said 60 cents. That comes out to $240 a year. You add that on to the hookup charge and that is still quite substantial, but not nearly as bad as it would have been did you not have the 1 percent sales tax.

Mr. NOTO. It would have been $525, as I indicated, if it went up to $1.38 per hundred.

You know, with all the ill-conceived problems we have had, all the inflationary reasons of cost escalation, there were none in the beginning. In 1968 or 1969 there was no track record for great escalation like that.

We can sit here all year long or for days and say what we should have done. The question is what are we going to do?

Mr. WRIGHT. Precisely.

Mr. NOTO. We should try to get more funds from the State and Federal Government. We need the cooperation.

We also need to clarify some of the laws that are imposed upon us.

Mr. WRIGHT. You made reference earlier to a law which compels you to bond the entire project.

Mr. NOTO. Not the entire project.

Mr. WRIGHT. Is that the State of New York?

Mr. NOTO. It is a financial law that says every dollar we use of the money you give us toward the capital project, is one less dollar we have available to bond, meaning that if we reduce the amount of money of bonding it is that much less money we have to go to the State and Federal Government for funding.

So what we are saying is basically we are forcing the situation to go for the full amount to extract the most we can from the State and Federal Government.

Mr. WRIGHT. Is this the result of a State law in New York?

Mr. NOTO. Yes; a financial law.

So what happened here—and there are many cases—if we had coordinated this long ago we might have saved people a lot of anguish and a lot of cost.

What is going to happen is the dollars you are going to give us are going to go to the first 6 years, the first 6 or 7 years of the debt service because we will not have that type of money available to us from the public.

But beyond that, we are talking about a moratorium. We are talking about right now if we were to stop the project to reevaluate.

The State has indicated that it would take possibly 2 years to do this and that, in fact, we would have to have a 201 study, which is going to take us 2 years. A 201 study can cut out the other drainage areas which they have said we should have in this project to get the funding.

You see, this is where we lie.

Mr. WRIGHT. Who had said this, Mr. Noto?

Mr. NOTO. State and Federal. Both the EPA as well as DEC.

We must take in the larger drainage area to get our State and Federal funding. What they are saying, which is a good concept, if you want our money, we want an original approach. We want you to do more to work for our dollars.

But the problem here is if we cut it out, if we make a small dimension on an interceptor, we could lose that funding. To do it, to have an evaluation, it is going to take maybe 2 years to do it. We will be forced into a 201 study, along the way, and who in God's name is going to pick up the rate, if, in fact, the escalation continues and the delays?

I do not know how we can impose that on the people. We are in a damned if you do and damned if you do not. We need money. We need to complete the project today, not tomorrow. Today, so we can get out of it.

The problem is here, I think we can learn from this to help the whole entire country, but it is here and the individual taxpayer could not bear the burden that has happened here.

We have other agencies to deal with. It is not just a flip of the magic wand. We are not playing Mary Poppins here.

We are threatened with $10,000 a day fees if we stop. They are not really fees, but fines from the State of New York DEC if we stop this project.

You have to know all the facts.

A guy like myself, a local legislator, has to fight for the most money and I have said many times before I will do anything less than selling my soul to do whatever I have to do to bring home that money to help alleviate the local taxpayer and I have done it. I have voted with this committee to force the county in a position to give us that money and we need more and this is where it sticks right now.

Mr. WRIGHT. Mr. Noto, there is reference to the possibility of small outfall lines. I do not know if that would be a viable proposition or not.

Mr. Ambro, our Chairman, asked one of the other witnesses how much money that could save. You're still going to have to dig the ditches?

Mr. NOTO. Absolutely.

Mr. WRIGHT. You are still going to have to lay the pipe?

Mr. NOTO. Absolutely.

Mr. Wright. All you save is the cost of pipe?

Do you have any figures for that?

Mr. NOTO. I do not have any figures.

What we are talking about is that it is not the major cost of the project when you're dealing with the outfall. We must understand that some of the people would like to stop this project by using recharge as a necessary tool, but, gentlemen, whether we have recharge

today or 10 years from today, we need an outfall pipe. That is our safety valve.

If we were to pump all the water back into the ground, into the ground levels, for recharge that we were to purify and put back in the water, if the Federal Government, in fact, says it is permitted, and that is another hangup, but if we were to recharge, what happens?

What conceivably happens if we have a major rainy season?

What happens if we just cannot put this water back in the ground?

Do we continue to do it and threaten every home in the Southwest Sewer District?

We have to have the outfall as a safety. It is academic. I really believe they have convinced me that outfall is a necessary evil, regardless of the cost. It has to be there.

Mr. WRIGHT. Sort of a spare tire?

Mr. NOTO. Absolutely.

Mr. WRIGHT. I think Mr. Guerrera was advocating the other route, and also indicated that it would have to be available or should be available.

Mr. NOTO. Right.

Mr. WRIGHT. I do not want to prejudge or prejudice the question. We will have some testimony later from the EPA.

But it is my tentative guess that a saving by reducing the size of the pipe would be relatively small.

Mr. NOTO. In my mind, and I have made up my mind, with the figures that have been kicked around, we are talking about maybe 5 or 6 percent in savings on the pipe itself and, in fact, the trenching area may not, and I am talking with the contractors, the engineers, may not be a major factor.

We will jeopardize and could jeopardize a tremendous amount of dollars lost at trying to make a savings that may not be worthwhile in the interest of the people. This is the problem.

To be cost effective may be the worst thing for the people in the Southwest Sewer District in certain areas.

Mr. AMBRO. I think you summed up the whole dilemma here by saying we are damned if we do and damned if we do not, because earlier Dr. Aldreoli put his finger on this whole question of size of pipes when he said that the size of the pipes anticipated additional projects hooking into the north and the east of this project.

If, however, you have a climate which will not permit people to support that kind of extension of the project, and the pipes sit there in anticipation and are too large both in terms of size and cost, in terms of its impact on the district residents, that is one aspect of the problem.

Tertiary treatment, of course, with its inordinate costs and rather dubious technology at the moment is indeed a solution, but one that may be far off.

I might just say that most of your testimony is surrounded or rotated on the cost and impact on taxpayers and without question that is one of the prime interests.

The other, of course, is environmental or ecological impact and whether or not this whole project from that point of view does more harm than good.

Your response is certainly the project must be continued. We might hear others who follow you almost immediately who might

suggest a stronger course, determination, or indeed a reevaluation not only from the point of view of cost, but from the point of view of environmental impact.

Anyway, we are falling behind.

I would like to thank you very much for coming before us and giving your point of view and making your time available and for the current words.

Some people do not know where I am on Sunday, but I am glad you do.

Mr. NOTO. Just one other thing.

The State has reviewed the plans and has felt, the State of New York, that it has been cost effective.

The Southwest Sewer District, really what it is about, is to cure poor planning as well as poor zoning in the past and, unfortunately, this is it. You have too many people living on an acre and we are here. We have it. It is almost impossible to stop.

Thank you.

Mr. AMBRO. Thank you, Mr. Noto. Your prepared remarks will appear at this point in the record.

[Statement referred to follows:]

STATEMENT OF SUFFOLK COUNTY LEGISLATOR ANTHONY NOTO

EFFECTS OF REEVALUATION OF SOUTHWEST SEWER DISTRICT NO. 3

Considerable attention has been given to having a moratorium on construction in the Southwest Sewer District No. 3. This moratorium is supposedly for permitting time for reevaluation of major interceptors, treatment plant and outfall. As presently designed, the Southwest Sewer District will be capable of handling flow from the future West Central Sewer District, north of the present Southwest Sewer District. Incorporating this northerly area would also necessitate increasing the number and size of permit units at the treatment plant but would not necessitate modification of the interceptor or outfall pipe.

Implications of a moratorium to permit a reevaluation would have a drastic impact upon the current cost of the project and is unnecessary. However, to undertake such a reevaluation, it is pointed out by representatives of the New York State Department of Environmental Conservation in Albany that a cost-effective evaluation would have to be undertaken for the entire tributary drainage area to the Southwest Sewer District. This would include areas as far north as Huntington Station and portions of Smithtown.

At this meeting it was indicated that development of such a proposal would take approximately two years, a time period which has also been confirmed by representatives of the Suffolk County Department of Environmental Control. The present sewer district conforms with the regional concept of New York State to which funding in the form of construction grants is allocated to the Southwest Sewer District. To reevaluate the plan at this time would also necessitate a possible reevaluation of the State's funding levels. In addition, the following will be obvious should a moratorium be imposed on the Southwest Sewer District including:

(1) Escalation of construction costs due to delays in letting of construction contracts.

(2) Jeopardize collection sewer funding for which the district has been placed on the State's 1977 priority list for approximately $108 million. Although such funds are being made available for fiscal year 1977, there are no assurances of obtaining these monies in future funding periods.

(3) As previously indicated, funding on the existing Southwest Sewer District would be jeopardized if the scope of the project was changed restricting the ability to handle flows from northerly areas in the future. This would be contrary to the regional planning concept set forth by New York State.

It has been indicated by State officials that the present design of the Southwest Sewer District is apparently the most cost effective even without a reevaluation. To minimize escalating cost for providing these vital services to residents of the district, construction should proceed as expeditiously as possible in conformance with current plans.

Mr. AMBRO. I would like to call on members of the Suffolk County Water Authority, Mr. Hazlitt and others, who will accompany him, Mr. Weinfurt, Mr. Koehler, and Mr. Guerrera.

I would like to welcome each of you.

Walter Hazlitt and I grew up as youngsters in Stony Brook. He has been a county legislator and the chairman of the Suffolk County Water Authority for a number of years.

I would like to welcome you, Walter, and your colleagues, and ask you to proceed.

PANEL CONSISTING OF WALTER C. HAZLITT, CHAIRMAN, SUFFOLK COUNTY WATER AUTHORITY; LOUIS W. WEINFURT, GENERAL MANAGER, SUFFOLK COUNTY WATER AUTHORITY; HERBERT KOEHLER, P.E., ASSISTANT GENERAL MANAGER FOR CONSTRUCTION MAINTENANCE, SUFFOLK COUNTY WATER AUTHORITY; AND AUGUST GUERRERA, CHIEF CHEMIST, SUFFOLK COUNTY WATER AUTHORITY

Mr. HAZLITT. Thank you very much.

Mr. Ambro, Congressman Wright, just for a point of information, the Suffolk County Water Authority is a revenue agency. It is operated under the public authorities law of the State of New York. The only source of revenue that we have available to us is that by virtue of the sale of water.

Just to condense my comments today, since we are running behind, I will give you a brief capsule of the problem that we are dealing with.

In the course of construction of the Southwest Sewer District at one time there were a maximum of 10 contractors running concurrently among 6 successful bidding contractors and operating 80 construction crews in the area at one time.

In order to meet the situation it was necessary for the water authority to employ additional personnel in order that we could comply with the regulations that are presently in force of marking our facilities out in advance of construction and operating and checking valves in order that if we did run into a problem that we would be able to control the situation and minimize the effect on the customers to the best of our ability.

I am not that naive that I realize a contractor is not in business for a profit and this in itself most certainly is not immoral. But my concern is the effect of the activity of the contractors upon the facilities of the Suffolk Water Authority.

I can cite streets in the course and history of the construction whereby there were 5,132 incidents relating to the facilities of the water authority.

I am also not that naive not to recognize that in some cases we are right, and in other cases we are wrong. Out of those 5,132 incidents, approximately 1,250 of them we realized and would accept the responsibility for and, in our judgment, most certainly no obligation was to be presented to the contractor.

Presently we have in the neighborhood of $669,287.34 of building damage incidents applied to the different contractors. We have been able and successful to receive $157.123.51. We have written off

$16,192.71 as a result of meeting with these particular individuals and saying, yes, in further review, this, in addition to the other 1,200 incidents, are our fault.

When we are talking about accepting responsibility over the past 5 years or the life of the construction of this project, the authority has written off in excess of $250,000 in damages, which we realize were due to errors on our part.

I would also be less than honest if I did not state at this time that the county government, particularly the Commission of Environmental Control's office, has attempted to be as cooperative as they possibly can. By that I am saying that initially when we met with them and attempted to resolve the problem between the water authority and the contractors, they offered the good use of their office whereby they would not finalize any contract or payment to the individual contractors unless the problem between the water authority and the contractors was resolved.

Unfortunately, in further investigation, I was advised by their office that this was illegal. They could not do it. But at least there was an attempt on their part.

We were also able to successfully negotiate with the commissioner's office as to the degree of responsibility when there was a conflict between the existing facilities of the water authority and the proposed sewerage. We arrived at what was considered to be a fair position.

If it was a county road, then, of course, the county having authority and control over it, we would not have to pay for any particular alteration. If it was a town or village road, then it would be a factor for us.

I would like to outline briefly, if I may, Mr. Chairman, some of the problems that have become very apparent and have been a source of problems to the water authority as far as our dealing with the contractors.

Mr. AMBRO. Mr. Hazlitt, if I may interrupt you just for a moment, I wonder if you could tell us how much of the Southwest Sewer District comes within the purview of the Suffolk County Water Authority.

Are there any other water districts or special districts serving water needs in the Southwest Sewer District?

Mr. HAZLITT. I would say probably the public water supply that serves the Southwest Sewer District is about 96 or 97 percent the water authority franchise area. There would be a small piece of East Farmingdale Water District and possibly a very small portion of South Huntington Water District.

Mr. AMBRO. I do not want to shift the focus of your testimony because certainly the problems encountered between the Suffolk County Water Authority and Southwest Sewer District are important. But it would seem to me that here the most vital part of all of this has to do with not the many encounters that you have with the southwest sewer district construction, but with your view of the impact of the project on both the quality and the quantity of the water, both now and in the future, and if you could or have other members of the panel address themselves to that, I think that would be most interesting because at least it would dovetail not only with the prior testimony of Mr. Guerrera, but some of the environmental-ecological concerns of many who are here and which have been registered and broadcast in both the newspapers and other media.

So that is a vital question to us and if you can touch on that, I would appreciate it.

Mr. HAZLITT. Well, most certainly, Mr. Ambro, for the record, in 1968, I believe, when the original concept of the Southwest Sewer District was conceived the water authority by resolution endorsed the project, but only if it provided for recharge.

We have seen a comprehensive water supply report that projects that we have a safe yield up to the year of 2020.

I speak strictly for myself and my own feelings. Any water reclamation project in Suffolk County most certainly must consider recharge.

While it is not germane to the subject this morning that we are talking about, there are areas existing in Suffolk County today—namely, the east end of the county—which probably within the next several years could conceivably become critical. The water authority is a regularory agency. We most certainly would be remiss if we did not consider the long-range plan as to whether we have to treat water on the way up, the possibility of that, the possibility of desalinization, and most certainly the ongoing investigation that is presently being conducted by the Brookhaven National Lab as far as recharge being a vital aspect of any water problem in Suffolk County.

Our system is fragile, to say the least.

Mr. AMBRO. Well, I appreciate your comments.

I think we recognize that without clean drinking water, and in view of the fact that New York City is pumping water from the upper reaches of the United States and Canada, we might very well lose the supply of water.

There are a number of programs kicking around which would pipe water from east to west into New York City, thereby diminishing our aquifers as well.

The question of water is bedrock, if I can mix a bad metaphor, to the survival of all of us on this island. I would like to ask you, as I asked others, your view of the impact of this Southwest Sewer District on the water supply and what you would recommend in terms of your expertise and those of your panel members with respect to the continuation of the project.

Anyone can address that; but I think it is fundamental to this whole inquiry.

Mr. HAZLITT. Well, I think basically when you talk about dropping the water table 20 feet you are going to have an esthetic effect. You are going to affect most certainly surface waters, which are extensions of the underground water supply.

We draw from wells that could be anywhere from 150 to 800 feet deep. As far as the water supply is concerned, I think initially it would have not an immediate impact but a long-range effect would be there.

If Mr. Guerrera or anybody else wants to make any comments, they may.

Mr. GUERRERA. As I stated earlier, the position of the saltwater interface is directly related to the elevation of the water table above sea level and if this system is taken out of equilibrium, then there may be a response to that water table.

Mr. AMBRO. You said the Suffolk County Water Authority approved the project initially with the proviso that there would be some form of recharge of tertiary treatment.

Have you ever communicated any official document to any of the authorities with respect to the thought that we now have secondary treatment with an outflow pipe of 30 million gallons a day?

Have you ever released your view officially or broadcast it?

Mr. HAZLITT. No; we have not.

The resolution as it was formulated in 1968 or 1969 was forwarded to the county board of supervisors and then Executive Dennison. I do not think the attitude of the members or their staff has changed.

We have participated in a lot of studies. We are involved in the South Forks study. We are involved in the 208 study, which is really beyond our scope of authority, so to speak.

We also are involved with the USGS project, their ongoing project, whereby they are conducting a study of developing a computer bank of information relating to the water situation.

Our attitude is that we are interested in anything that gives us an insight into the quantity and the quality of the water.

I think we made our position very clear not only in public statements that we have made, but most certainly in our billing inserts that reach 220,000 homes in Suffolk County.

I would say we have expressed our position numerous times.

Mr. AMBRO. I have a copy of the fliers that went out to the citizens of Babylon and Islip urging an affirmative vote on the referendum for the southwest sewer district with the underlying proviso that the planned referendum includes assurance that all purified effluent is recharged into the underground reservoir as to insure that the water resources are not depleted.

Now, without question that was a commendable proviso, but what gave anyone any thought that under the present or then present design concept in technology that there would be tertiary treatment and recharge?

That was the whole argument of those who opposed the setting up of the Southwest Sewer District and I do not think there was any rebuttal to the thought that there would not be recharge in this design.

How did that come about?

Do you have any idea?

[Discussion off the record.]

Mr. AMBRO. I just wondered while you are talking about that if really the citizens of the Southwest Sewer District understood that rather esoteric language and the distinctions between primary, secondary, tertiary, recharge, and impact.

So I say again, while the proviso is commendable, I do not remember any hope that there would be recharge in the system and all the thoughts that came from those critics who demanded recharge was that the cost would be so overwhelming that we just could not get it and this would not have any adverse impact on the water supply.

In any event, if you would like to comment on anything I said, feel free to do so.

Mr. HAZLITT. Well, Mr. Congressman, of course at that time the technical feasibility of recharge was questionable and I think through the early 1970's that question was raised as to whether we had the ability or the expertise to do it.

You could get one set of engineers who would say it is physically impossible and we could come up with another set who would say no problem to it; it can be done.

In the early 1950's, of course, we never thought we would get to the Moon either.

I think the feeling at that time was even though it was not feasible at that time, it was something that had to be accomplished. We have to do it. It is as simple as that.

We were in a drought period. The water table probably was much lower than it is today. I think there were people who were aware of the limitations of the water supply.

Mr. AMBRO. There were people aware of it without question.

Bulletin 62 of the consortium of the USGS New York planners indicated before an irreversible course is set that for regional purposes and water supply on Long Island there had to be a water budget, a water management study done, in order to assure that our drinking water supply be protected.

Just recently, and long after the fact, this project was approved. I think every indicator even then was what we have to have on this island is some system of recharge and it is just unfortunate that we are here talking about recharge even at a time when technology might exist and the cost is still way beyond our means.

I serve on the Science and Technology Committee where just recently we included millions of dollars in order to develop modular units and better technology for these kinds of systems to insure better recharge. That comes long after the fact, but between the time that we do these things and the time they become available, all kinds of horrors can happen and I think the constant talk about recharge is one which might put each of us on this island in a period of expectations far beyond our hopes.

So I think we have to deal with the realities of the situation and try to get some recommendations as to how best to proceed, either to continue the project, modify the project, change formulations of cost, diminish the impact in terms of taxes on people who live in it, and a whole host of other things.

That is why this hearing is broad based. That is why the investigators have been here for months. That is why they will continue even after this. That is why this committee will continue to review this even after this.

Hopefully with all of your help and the help of all of the others who will be before us we might come to some kind of a hopeful conclusion.

Mr. WRIGHT. Mr. Chairman, may I ask a question?

Mr. AMBRO. By all means.

Mr. WRIGHT. Mr. Hazlitt, I came here today quite considerably less knowledgeable about this matter than my colleague, Mr. Ambro. I had a couple of questions in my mind.

The first was whether the design of the project was an appropriate design of adequate size and scope and an appropriate size and scope to attend to the needs of this area?

You have just been discussing that.

There was a second question in my mind. I could scarcely conceive of reasons why the anticipated cost of completion has escalated so wildly to more than twice what it was initially expected to cost.

Now, a comment you made earlier begins to shed some light on at least a part of this question.

You stated that Suffolk County Water Authority had sought to collect damages from some seven contractors and I believe you said

in the sum of $669,000. Then you say that of that sum, $157,000 have been recovered from these contractors. So the water authority just canceled some $16,000 of supposed damages. This leaves a difference, if I am correctly adding and subtracting, of something like $495,000 that still is in question. That is an astounding figure.

I have the impression that you might have a list of these accounts, and I wonder if you would make that available for the committee?

I am not asking you to read it to us, but I am asking that you make it available for our files.

Mr. HAZLITT. Absolutely, Mr. Chairman. No problem at all.

In addition, though, with your figures there, I would just like to call your attention that we have accepted responsibility for incidents that total an additional $250,000 or $260,000 that were not billed to the contractor, that job orders were written up on, but no invoice submitted.

Mr. WRIGHT. Well, now, you are saying that the county water authority has gone ahead and paid $250,000 or assumed responsibility to pay $250,000, but you cannot properly identify it?

Mr. HAZLITT. We can identify it, but we have to accept responsibility whether it was a mismark or an omission or a commission on our part.

Mr. WRIGHT. Now, on top of that, you still have in question and being contested some $495,00 worth of damages that you are claiming against these various contractors?

Mr. HAZLITT. That is correct.

Mr. WRIGHT. Is that correct?

Mr. HAZLITT. Yes.

Mr. WRIGHT. That is almost half a million dollars.

What kinds of problems could account for this?

What kinds of problems occurred during construction that amount to this claimed damage?

Mr. HAZLITT. If I may refer to my notes, Mr. Chairman.

Just to give you an idea as to the nature of the problems that we have become involved with and we feel that we are entitled to redress on, one is with regard to improper backfilling procedures.

These are all items that are covered under the specifications of the contract that the contractors bid on.

Mr. WRIGHT. It is your contention?

Mr. HAZLITT. That is our contention.

Mr. WRIGHT. That the contractors in these instances failed to live up to the terms of the contract; is that correct?

Mr. HAZLITT. That is correct.

Mr. WRIGHT. You mentioned backfill.

Mr. HAZLITT. Right.

Mr. WRIGHT. What else?

Mr. HAZLITT. Backfilling and just under that that the contract provides handtapping under water mains during the backfilling procedure, which if they do not do can cause uneven settlement. If you have uneven settlement you will eventually have a main break.

Riding equipment, heavy equipment over recent excavations which have not properly been backfilled——

Mr. WRIGHT. Excuse me, sir.

I do not mean to interrupt you, but my curiosity impels me to ask you something.

Have there been any actual breaks in these?

Mr. HAZLITT. Absolutely.

These are just a cross section of the job orders of incidents that we have been involved in during the construction.

Mr. WRIGHT. They lay the mains, put the soil on top of the mains, and you contend it was done in an unprofessional and inadequate way and the mains as a result have broken?

Mr. HAZLITT. Yes, sir. That is our contention.

Mr. WRIGHT. How many breaks in the mains?

Mr. HAZLITT. Well, we have suffered, as I say, 5,000 incidents. I should say they are either main breaks or house services. That is the connection from the main to the residence. This is in excess of 5,000.

Mr. WRIGHT. Is there something peculiar about the topography or the soil conditions of this island that would lend themselves to that?

That is most unusual, it seems to me.

Mr. HAZLITT. I would say no.

We feel that in 3,800 of those particular cases or 3,820 it is the direct responsibility of the contractor and he failed to comply with the specifications of the particular contract he bid on.

Mr. WRIGHT. Meanwhile, if a main breaks, a water main, people are without water; are they not?

Mr. HAZLITT. That is correct.

In a lot of cases the incidents were with regard to house services, which are usually a ¾-inch connection running from the main to the house. The contractor, according to the specifications, is supposed to go no closer than 2½ feet on either side of the marked facilities and he is then to locate it by hand before they proceed with the construction; and in a lot of cases they have cut right through it. They have crimped the ends of the pipe in order to restrict the water coming out of the main and have gone right through with their work.

About 4:30 or 5 o'clock in the afternoon we will get a call that we have a problem in such and such an area and, of course, we are involved in overtime on that, so that just compounds the cost to the Authority in dealing with the problem.

In other cases they do not even bother telling us. We are not made aware of it until the customer calls and says, Hey, I'm out of water.

Mr. WRIGHT. What kind of future problems do you anticipate as a result of this?

Are there going to have to be extra repairs in future years?

Mr. HAZLITT. Well, there is no doubt that with the improper backfilling that we will be plagued in incidents. It could be for the next 2, 4, 6, 8, even as much as 10 years. Periodically we will experience main breaks. There is no doubt about it.

In order to protect the residents of the area we have increased the coordination in the area. We have taken extra samples of the product to make sure that we have no problems with it. We have taken every measure to protect the consumer that we can conceivably think of.

Mr. WRIGHT. Do you have any estimate as to the likely amount annually that you might anticipate?

Mr. HAZLITT. Yes.

We would estimate, Mr. Chairman, in the course of a year it results in a financial impact on the authority of about $1 million. That is talking about operating costs and damage claims.

Of course, the contractor, when you are dealing with him, and you start filing claims against him, these are professionals. They are not exactly choir boys you are dealing with. They turn around and they countersue us for the same amount. They figure when we get into court it is going to be a Mexican standoff or, most certainly the judge will reduce the financial impact of the claim.

This is what we are faced with.

Mr. WRIGHT. I am not trying to prejudge that question, of course. Perhaps you will wind up in court. Those equities will have to be resolved by means other than those concerning us here today. It would be very presumptuous of me, of course, to attempt to assess the right and wrong of each of these things.

I just wanted to get a feel for your relief.

If I am correct, I believe you said that all these breaks in mains that have occurred, the damages have been suffered by the citizen as a result of the stoppage of water service and extra costs in going in and replacing and repairing, which comes to some half a million dollars; but yet is unresolved?

Mr. HAZLITT. That is correct.

Mr. WRIGHT. That is your contention and that extra costs which may be incurred by the Suffolk County Water Authority as a result of this deficient performance of the contract, in your judgment, might come to as much as $1 million a year.

Mr. HAZLITT. Well, the total cannot all be applied to the claims we have against the contractor. Just the normal construction of a project of this magnitude requires that we must hire additional personnel to comply with the State law as far as underground facilities are concerned.

Mr. WRIGHT. So that that $1 million a year figure is not necessarily attributable to the failure of the contractors to live up to the contract?

Mr. HAZLITT. That is the total impact of the project known as the Southwest Sewer District.

Mr. WRIGHT. The whole thing.

It is going to cost you $1 million a year to operate, maintain, and keep it going?

Mr. HAZLITT. Yes.

Mr. WRIGHT. All right.

Thank you, Mr. Chairman.

Mr. AMBRO. Thank you.

You will, Mr. Hazlitt, comply with the chairman's request and provide us with those records and I would hope you would provide us with any other written statement that you would like to make for the record incorporating your remarks that you made here.

[The material referred to follows:]

STATEMENT OF SUFFOLK COUNTY WATER AUTHORITY, WALTER C. HAZLITT, CHAIRMAN

The Suffolk County Water Authority is a public benefit corporation which operates by virtue of the Public Authorities Law of the State of New York. Its only source of revenue is from the sale of water to its customers. It has no taxing

powers and any costs that are incurred by the Authority must be paid for by the sale of water to its customers.

The Authority came into being as an operating and revenue producing agency in 1951. The predecessor company, South Bay Consolidated Water Company, consisted of a number of geographically isolated areas that were supplied with public water, i.e., Village of Amityville, Village of Bay Shore, Village of Patchogue, and the surrounding areas. The water supply systems in some of these villages were small privately owned companies and many were constructed in the early 1900's. Because of this, records of the older areas of the Authority's distribution system are not complete.

Whenever underground facilities are installed, there will be interference and difficulties with other facilities already in the ground, and installation of sewer lines in the Southwest Sewer District was no exception. However, the magnitude of the problems was much greater than it should have been.

In 1972 the Suffolk County Department of Environmental Control started construction of sewers in the Southwest Sewer District. Many sewer contracts were let almost immediately and by the middle of 1974, there were ten contracts under construction by six contractors using eighty construction crews working in the many areas of the Southwest Sewer District.

To protect Authority facilities, it was necessary for the Authority to hire additional personnel. Additional work required of the Authority personnel included the locating and marking of our underground facilities in the field, and inspection at the construction sites to protect Authority facilities. In addition to this, it was necessary to expedite our program of locating and testing all valves and raise all valve boxes in the areas of sewer work and also inspect hydrants prior to construction and inspect and repair the hydrants immediately after they were used by the contractors. At our Bay Shore and Babylon District Offices, the workload increased because of complaints generated by sewer construction. This required additional office and field help. It was necessary to increase the number of maintenance crews in order to handle the large volume of maintenance work caused by the installation of sewers (broken water mains and water services).

Sewer contractors or any contractors are in business to earn money, and the more sewer pipe installed in any given day means they earn that much more money.

There is no comparison between the speed of digging a trench by machinery as compared to using hand tools. Therefore, any time a water service or a water main interferes with a sewer line, it can slow down progress of sewer installations, and reduce the contractor's profit. As an example, when a sewer line has to be installed beneath a ¾-inch service line supplying water to a house from the main in the street, the Authority locates and marks this service in the field and the sewer contractor is required to hand dig around this facility in order to accurately locate it and protect it. This is required in their contract with the Department of Environmental Control, and more recently it is required by State Law. Too many times a contractor ignored the markings and kept digging with mechanical equipment until the water service was broken. Since only a comparatively small amount of water leaked from these lines, many times the leak was ignored or the end of the broken copper line was simply crimped to stop the flow of water until quitting time. A request for assistance was then made to the Authority requiring that our repairs be made on an overtime basis.

Due to the numerous contracts in progress at one time, and the large number of work crews, our limited number of inspectors could not cover the entire area. In the beginning, we did not have the close cooperation of the sewer inspectors in protecting our facilities.

The specifications of the Department of Environmental Control required the contractor to survey each street prior to the commencement of construction to make sure all utility marks were visible, in most cases this was not done. Another problem encountered was that a contractor would cover up the marks and later claim the marking was not there. This and other instances where the contractors did not follow Department of Environmental Control specifications, are indicated in Annex V.

Another phase of construction that the Authority feels was not handled properly and has cost the Authority many thousands of dollars was backfilling of trenches. Three specific actions that caused problems were; first, proper care was not taken where the fill material was pushed into the hole; second, the backfill material

was not properly compacted in and around our facilities; and third, large chunks of hard material, i.e., broken pavement, rocks, were carelessly thrown on top of our facilities. Some of this improper backfilling caused leaks to appear within a day or two and some leaks appeared weeks afterwards. We expect to find similar leaks months and years from now. The contractors have made statements that some of these facilities were quite old, and if they were new, they could withstand the abuse. If the sewer had been properly installed and the facilities properly protected, most of the damages we experienced would never have happened.

Another major problem the Authority experienced on small service lines was that with full knowledge and forethought some sewer contractors, without approval of the Authority, did deliberately cut the water service line in order to speed sewer installation. The Authority was made aware of this only when a customer called complaining of no water.

There is another clause in the contract between the sewer contractor and Department of Environmental Control which generally states that contractors will protect other underground facilities while these facilities are exposed. Many times comparatively long lengths of water mains were left exposed and unsupported so they eventually settled and broke, and at other times they were left exposed overnight during winter months and froze.

In 1971, the year before sewer construction was started, the Authority had a total of 463 leaks in the Babylon District. In 1974, the Authority has a total of 1,740 leaks in this same district. In 1971, our Bay Shore District of the Authority, had a total of 338 leaks and in 1974, the Authority had a total of 1,001 leaks in this district (see ANNEX I). Considering that, annually, sewer construction was going on in about only ten percent of the geographic area of our Babylon and Bay Shore Districts, whereas the record of leaks for all of 1971 covers the entire area of these Authority districts, the phenomenal increase in leaks that we experienced directly due to sewer construction is apparent.

Over the past four years, Authority inspectors, engineers, and management personnel met with representatives of Bowe, Walsh & Associates, representatives of Suffolk County Department of Environmental Control, and various contractors, in order to help alleviate some, if not all, of these problems. More recently, the Authority has been more successful in obtaining the cooperation of the Bowe, Walsh & Associates inspectors and the Department of Environmental Control.

Since the beginning of sewer construction, whenever there was any damage done to the Authority's system, Authority records were maintained, and where our investigation indicated that the contractor was at fault, an invoice was forwarded covering our costs and a carbon copy sent to the Department of Environmental Control. There may have been some inaccurate markings by Authority personnel and where damage was caused to a facility because of this, no invoice has been forwarded to a contractor. During the early phase of construction, except in one or two cases, these invoices were ignored. However, as time went on the Authority did take some action; and then some contractors in turn billed the Authority for time lost caused by broken water mains and services.

The Authority has no obligation to pay any monies to sewer contractors because of lost time. It is their legal and moral responsibility to survey the area ahead of time and make themselves aware of any utilities and underground facilities that might conflict or interfere with the sewer construction. As an example, the Authority has been installing an average of 130 miles of pipe per year for the past fifteen years and we do all the preliminary work indicated above before any water main is installed.

In addition to this, the following is quoted from the specifications of the Suffolk County Department of Environmental Control:

"The Contractor shall at his own expense make good any direct or indirect damage that may be done to any utility structure in the prosecution of his work. The liability of the Contractor is absolute and is not dependent upon any questions of negligence on his part or on the part of his agents, servants, or employees and the neglect of the Engineer to direct the Contractor to take any particular precaution or to refrain from doing any particular thing shall not excuse the Contractor in case of any such damage. Special precautions shall be taken by the Contractor to protect his men, equipment and property of others while working in the vicinity of utilities."

Our early investigations indicated the vast majority of claims for lost time were unfounded and, if nothing else, greatly exaggerated. More recently, the Authority had meetings with one contractor and indicated that we would institute legal action to collect damages. This resulted in an immediate reaction from this contractor and we received invoices for lost time totalling almost the exact amount we were billing them. Each of his claims were investigated and our records indicated that at best, only about 8% of his total charges had some legitimacy. By legitimacy, we mean that the water service or water main was inaccurately marked and the time lost by the contractor appeared to be correct.

We feel very strongly that if the sewer contractors followed the specifications in their contract with the Department of Environmental Control, and if the specifications were properly enforced at all times, the damages experienced by the Suffolk County Water Authority would have been minute compared to what we actually experienced. It is interesting to note that where the danger is great as in the case of damage to gas lines, disruptions were minuscule as compared to the damage done to the water facilities (see ANNEX I & II).

Monies expended by the Authority since sewer construction started has been a great burden to all of our consumers. In fact, it has been so great that it was partially responsible for our first rate increase in fifteen years.

We should like to point out typical Authority costs in our fiscal year 1975 that were necessary to protect the Authority system and assist in the installation of sewers.

1. It was necessary for us to hire and/or assign two engineers and four inspectors to do this work on a full time basis. The annual cost has been $102,000. This money is not collectible.
2. It has been necessary for the Authority to hire additional personnel and assign additional crews to do nothing but to locate and mark our existing facilities. The annual cost has been $91,000. This money is not collectible.
3. We have had to hire additional personnel in order to assign additional valve locating crews. The annual cost has been $79,000. This money is not collectible.
4. It is estimated that we have written off an average annual damage cost of $56,000 because it was felt that the contractor could not be held responsible. This money is not collectible.
5. It was necessary for the Authority to handle all of the telephone and written complaints received from our customers caused by the installation of sewers, and some of the homeowners had to be visited personally by Authority representatives and/or the complaint checked in the field. This also increased the workload in the office. It is estimated that at least two employees' time was used in each of our district offices. The annual cost has approached $70,000.
6. Because of frequent breaks, the Authority had to increase the rate of chlorination at all of our pumping stations in the area of the Southwest Sewer District and for the same reason it was necessary to take additional water samples in the distribution system. This increased our workload in the Laboratory for the Bay Shore and Babylon Districts by approximately 25%.
7. The additional costs of supplying larger doses of chlorine, taking more samples, and processing more samples, it is estimated to be $10,000. This money is not collectible.
8. We are facing a number of law suits for alleged damages due to sewer related work. Among these are where people have tripped over stakes that we were requested to install as a method of marking our facilities, and damages caused by discolored water because of contractors use of Authority hydrants. Cost of this is unknown.
9. We have billed various sewer contractors for a total of $669,000, for which we received a total payment to date of $157,000, leaving an outstanding balance of $512,000. It is obvious that to collect a portion of these remaining monies, it will be necessary for the Authority to expend additional monies in the form of legal action. (See ANNEX III & IV).

In summary, the installation of sewers in the Southwest Sewer District has placed a substantial financial burden on the Suffolk County Water Authority, which cost will in turn have to be absorbed by our customers. It also has caused problems, inconvenience, and interruptions of service to many thousands of water Authority customers.

ANNEX I

RECORD OF THE NUMBER OF BROKEN WATER MAINS AND WATER SERVICES

	1971	1972	1973	1974	1975
Babylon district: [1]					
Mains	39	[2] 177	158	216	194
Services	424	[2] 697	844	1,525	1,256
Total	463	874	1,002	1,741	1,450
Bay Shore district: [1]					
Mains	24	28	[3] 76	137	139
Services	314	550	[3] 604	864	909
Total	338	578	680	1,001	1,048

[1] On an annual basis, sewer construction was only involved in approximately 10 percent of the area served by each of the above districts.
[2] Sewer construction started March 1972.
[3] Sewer construction started in October 1973.

ANNEX II

NUMBER OF WATER MAINS AND SERVICE LEAKS CAUSED BY SEWER CONSTRUCTION

Contractor and contract number	Total number of breaks in each contract zone	Number of breaks SCWA did not bill contractor	Number of breaks contractor at fault
J. D. Possilico, Inc.:			
1004 [1]	165	32	133
I-9	68	2	66
2004 [1]	198	74	124
II-11R [1]	73	6	67
II-8A	18	4	14
3002-3-4	245	91	154
3001-7 [1]	622	134	488
III-8	64	26	38
5004	33	13	20
6008	146	42	104
VI-7B [1]	15	3	12
Total	1,647	427	1,220
Davis Construction:			
2003 [1]	558	156	402
2009	351	54	297
Total	909	210	699
Marvec Allstate Inc.: 6001 [1]	125	27	98
S. Zara & Sons: 2005 [1]	152	33	119
Lizza Industries:			
1005-7-10 [1]	271	77	194
I-7	2	----	2
2007	64	24	40
6004 [1]	300	20	280
6006	111	7	104
3005-6	22	7	15
Total	770	135	635
Hendrickson Bros., Inc.:			
1001 [1]	160	53	107
2001 [1]	190	89	101
I-10 [1]	79	33	46
1008-9 [1]	189	77	112
II-10AR	49	12	37
Total	667	264	403
Schneider Assoc.:			
1002-3 [1]	248	46	202
2012 [1]	372	92	280
3005-6	190	44	146
V-8A [1]	28	7	21
VI-7A	24	----	24
Total	862	189	673
Grand total	5,132	1,285	3,847

[1] Contracts 1 year past 95 percent completion date.

Note: These totals are up to Aug. 31, 1976, and only include number of breaks from start of construction to 1 year past 95 percent completion of each individual contract.

ANNEX III

RECORD AND RESULTS OF MEETINGS WITH SEWER CONTRACTORS AND CONSULTING ENGINEERS

Contractor and contract number	Approximate date of meetings	Amount contractor agreed to pay	Amount not received from these agreements
S. Zara & Sons: 2005	June 1975, Oct. 1, 1975	$5,409.10	$5,409.10
J. D. Possilico, Inc.:			
III–8			
6008			
5003–4–7			
VI–7B			
II–8A			
3002–3–4			
II–11R	July 1975	6,713.93	Paid
2004	do	11,714.51	Paid
I–9	June 25, 1975, July 3, 1975	4,508.65	Paid
1004–6	June 25, 1975, July 3, 1975	4,557.91	Paid
3001–7	May 6, 1975, Nov. 6, 1975	17,636.09	3,823.31
Total			3,823.31
Schneider Assoc.:			
1002–3	July 1975	13,086.52	Paid
2012	July 1975, Aug. 22, 1975	12,047.61	Paid
3005–6			
VI–7A			
V–8A	July 1975	2,002.00	Paid
Marvec Allstate, Inc.: 6001	July 1975	6,433.75	6,433.75
Total			6,433.75
Davis Construction:			
2003			
2009			
Lizza Industries:			
1005	July 1975, Oct. 16, 1975, Mar. 18, 1976.	9,832.65	9,832.65
2007	June 1975, Jan. 18, 1976	1,784.11	1,784.11
3005	Mar. 27, 1976	1,328.93	1,328.93
6004	June 1975, Jan. 18, 1976	21,008.47	21,008.47
6006	Mar. 27, 1976	6,786.94	6,786.94
Total			40,741.10
Hendrickson Bros., Inc.:			
1001	July 1975	225.92	213.50
2001	do	91.76	Paid
I–10	do	8,566.23	Paid
1008–9	do	10,008.43	61.03
II–10AR			
Total			274.53

Note: Grand total not received but agreed to be paid: $56,681.79.

ANNEX IV

SUFFOLK COUNTY WATER AUTHORITY—SEWER-CONNECTED DAMAGES BILLED TO DATE[1]

	Billed	Paid	Canceled	Balance
Bay Shore:				
Davis Construction	$50,076.22			$50,076.22
Hendrickson Bros., Inc	885.73	$630.89		254.84
Lizza Industries	13,576.25			13,576.25
J. D. Possilico, Inc	39,520.31	22,396.67	$424.60	16,699.04
S. Zara & Sons	18,913.95	1,864.24		17,049.71
Schneider Associates	48,076.87	15,269.13	1,171.45	31,636.29
Subtotal	171,049.33	40,160.93	1,596.05	129,292.35
Babylon:				
Lizza Industries	85,987.55	653.79		85,333.76
Hendrickson Bros	100,126.08	49,443.51	13,329.90	37,352.67
Schneider Associates	55,257.07	26,007.38		29,249.69
J. D. Possilico, Inc	175,982.49	40,120.84	1,266.76	134,594.89
Davis Construction	68,262.85	737.06		67,525.79
Marve C. Allstate	12,631.97			12,631.97
Subtotal	498,248.01	116,962.58	14,596.66	366,688.77
Grand total (125–6)	669,297.34	157,123.51	16,192.71	495,981.12

[1] For construction completed to June 30, 1976. Payments received to July 31, 1976.

Annex V

LIST OF ACTIVITIES BY SEWER CONTRACTORS IN CONTRAVENTION OF SUFFOLK COUNTY DEPARTMENT OF ENVIRONMENTAL CONTROL AS OBSERVED BY SUFFOLK COUNTY WATER AUTHORITY PERSONNEL

(1) Improper backfill procedure:

(*a*) Not hand tamping under water main during the backfilling procedure which causes uneven ground settlement.

(*b*) Riding heavy equipment over recent excavations which have not been properly backfilled.

(*c*) Failure of contractor to visibly inspect the contents of backfill material used in the construction process.

(*d*) Contractor having the practice of delaying his backfill procedure until late in the day, causing us to have a peak demand for repair crew during our off hours.

(2) Improper support of water mains during the construction operation.

(3) Contractor not maintaining marks by:

(*a*) Failure to transfer existing markings depicting water main and water service locations, when they are going to be obliterated during the construction process, causing the same water main and service sometimes to be broken more than once.

(*b*) Failure of contractor to transfer existing markings before placing construction equipment and supplies on job site which cause markings to be covered.

(*c*) Failure to align header pipe suction systems, which are used in de-watering operations, in such ways, to avoid the covering up of existing values. This results in causing a much larger and unnecessary shut down of the consumers water supply while damages caused by construction procedures are being remedied.

(*d*) Failure of contractor to look for existing marks by the sumple means of sweeping the dirt off the street.

(4) Failure of contractors to adhere to specifications in reference to sheeting support in various open trenches. This practice causes unnecessary cave-ins and undermining of trench walls which results in damages to utilities.

(5) Contractor having the practice of working into and past the hours of darkness, causing unnecessary breakage of utilities.

(6) Contractor not hand digging within the two and one-half (2½) feet specification.

Record of complaints received by district office and investigated in field

	Number of complaints
Babylon district:	
1971	9, 000
1972 (Sewer construction started March 1972)	10, 500
1973	14, 750
1974	12, 800
1975	11, 450
Bay Shore district:	
1972	9, 732
1973 (Sewer construction started in October)	10, 485
1974	11, 787
1975	13, 143

Mr. Ambro. I appreciate your appearance, each of you, I am sorry we did not get to each of you, but we do have, as I said earlier, a long agenda.

Mr. Ambro. I would like to call next Mr. James Tripp, who is an attorney with the Environmental Defense Fund; and Mr. John Black, an associate professor of Suffolk County Community College.

After the segment with Mr. Tripp and Mr. Black, we will have Mr. Barry Andres, who is commissioner of the Department of Environmental Control, Town of Islip, and Mr. Robert Ritzert, who is the Director of the Department of Environmental Control of Babylon.

This segment is to discuss the impact of the proposed outfall need and the environmental concerns generally.

So if you will, Mr. Tripp, you may proceed.

PANEL CONSISTING OF JAMES T. B. TRIPP, ATTORNEY, ENVIRONMENTAL DEFENSE FUND; JOHN A. BLACK, LONG ISLAND AUDUBON COUNCIL/NORTH FORK ENVIRONMENTAL COUNCIL; AND PAUL D. MOSKOWITZ, SCIENCE MONITOR, ENVIRONMENTAL DEFENSE FUND

Mr. TRIPP. Thank you very much.

Mr. Ambro and Mr. Wright, perhaps I should call you both chairman. I am a little confused.

We have a third person up here, Mr. Paul Moskowitz, who is a marine scientist, who works with us.

We thought the appropriate way to proceed would be to have Mr. John Black begin with some discussion of the hydrology. Then Mr. Moskowitz can discuss some of the impacts of the bay and the shellfish industry. Then I will follow with some additional comments.

Mr. AMBRO. I think that would be fine.

We understand a bit about this. If you work within very tight time constraints in terms of opening statements. I would appreciate it.

Your statements will be made a part of the record.

[The statements referred to follow:]

STATEMENT OF JAMES T. B. TRIPP, COUNSEL, AND PAUL D. MOSKOWITZ, SCIENCE MONITOR, ENVIRONMENTAL DEFENSE FUND, INC.

Mr. Chairman and Members of the Committee:

The Environmental Defense Fund (EDF) is a non-profit, tax-exempt, nationwide coalition of scientists, lawyers and economists dedicated through litigation and involvement in administrative governmental proceedings to the preservation and improvement of environmental quality. It is supported by a nationwide active membership of some 38,000 citizens. We appreciate the request of the Chairman of the Subcommittee to present testimony.

EDF's active participation in monitoring the sewering programs on Long Island began on June 29, 1971 when it sent a petition to the U.S. Environmental Protection Agency (EPA), Region II, requesting that an Environmental Impact Statement (EIS) be prepared pursuant to Section 102(2)(C) of the National Environmental Policy Act of 1969, relating to wastewater management in the groundwater area of Nassau and Suffolk Counties, New York (1). Subsequent to this petition, EPA prepared an EIS, dated July 1972, on Waste Water Treatment Facilities Construction Grants for Nassau and Suffolk Counties, New York (2). When two more years transpired without implementation of a water quality management planning process under NEPA (3) or Section 208 of the 1972 Federal Water Pollution Control Act Amendments, (3, 4), EDF initiated legal action on July 16, 1974 against EPA and the New York State Department of Environmental Conservation (NYSDEC) in a 60-day notice letter to correct this continuing lack of a management plan. (5) Suit was initiated on December 3, 1974 (6). Shortly thereafter, the Nassau-Suffolk Regional Planning Board was designated as a 208 planning agency.

In addition to these activities, EDF is a member of the Nassau-Suffolk 208 Citizens Advisory Committee and has participated in several administrative hearings on Long Island sewering projects.

In view of the complexity of water quality problems in this groundwater area, wastewater management planning which is capable of identifying and evaluating all significant environmental, economic and social implications of alternative facilities plans is essential.

This Committee is interested in the impact of the Southwest Sewer District (SWSD) facility on a local community. We shall discuss the environmental benefits and water quality objectives claimed for the project, and the environmental liabilities. All of these environmental impacts are economically significant over time. We shall also discuss how various aspects of the SWSD project reflect institutional or legal problems with existing federal water legislation or implementation of that legislation by EPA.

ENVIRONMENTAL OBJECTIVES OF THE SOUTHWEST SEWER DISTRICT

The SWSD appears to have three implied water quality-public health objectives. They are:

(1) the improvement of the quality of groundwater, particularly in the Glacial Aquifer, in the SWSD.

(2) improvement of the quality of the waters of Great South Bay, a major shellfishing estuarine area; and

(3) a reduction in the number of cesspool failures in the SWSD and attendant public health problems.

In our review of documents relating to the SWSD, we have found very little, if any, documentation defining these objectives and little supporting evidence indicating that the District will achieve these objectives. Thus, although the project will cost some $640 million, it is not clear what it will accomplish in terms of specific water quality improvements.

(1) First, with respect to objective (1), although it cannot be denied that collection of cesspool (or septic) wastes in the SWSD will improve Glacial water quality, particularly by reducing nitrate contamination of this water, we have seen little data indicating what degree of improvement in existing groundwater quality can be expected, and whether the anticipated improvement in water quality will be sufficient to restore the Glacial Aquifer underlying the SWSD as a source of public water supply with cost effective wellhead treatment. At the present time, most of the drinking water for this area comes from the Magothy Aquifer which, fortunately, is not being contaminated by Glacial Aquifer water near to the south shore. Since the Magothy Aquifer is recharged through the Glacial Aquifer further inland, a program designed to minimize pollution of the groundwater to protect water supplies should concentrate on implementation of pollution controls, including watershed management, in inland recharge areas, roughly located in the middle third of the island (7). Since Glacial waters near the south shore cannot loom as a significant source of public water supply, the usefulness of very expensive projects designed to restore the potability of such waters must be open to doubt. Furthermore, sole emphasis on the contribution of household pollutants has led to the underemphasis of the significance of stormwater runoff as a source of contaminants, particularly auto-related toxic materials (8, 9, 10, 11, 12).

(2) With respect to the second objective, we have not seen quantitative data assessing what water quality improvements in the form of reduced coliform concentrations or nutrient levels, which may lead to eutrophication, will occur in Great South Bay as a result of the construction of the collection system and ocean disposal of treated wastewaters. Undeniably, cesspool or septic systems near enough to the shoreline to be tidally flushed cause coliform contamination. However, the limited data which we have seen suggests that stormwater runoff may play a far larger role in coliform contamination of Great South Bay than leaching of domestic wastes (9, 10, 12, 13). Bulkheading and destruction of wetlands have also contributed to pollution of the Bay in developed areas. In this connection, the New York State Tidal Wetlands Land Use Regulations, proposed by the NYSDEC, provide for a setback of 100 feet for new septic systems or cesspools along Great South Bay and other tidal wetlands (12). We have been advised by the Department that existing evidence could not support a more stringent setback requirement. Ipso facto, that same Department has very little, if any, data to indicate that the SWSD will improve Great South Bay water quality. Alternatively, if the SWSD is necessary to improve Bay waters, the lack of controls over new subsurface systems along the south shore of Suffolk County will lead to conditions requiring construction of other massive sewering systems.

(3) With respect to the third objective, we have also not seen quantitative data indicating the significance of the cesspool failure problems in the SWSD and the magnitude of the public health problem. If cesspool failures constitute a major justification for completion of this project, a cheaper and more cost-effective solution to this problem, including a geographically more circumscribed district, should be considered (7).

THE ADVERSE ENVIRONMENTAL IMPACTS

The SWSD has several identifiable adverse environmental impacts which have long-term economic implications for the county and its residents. USGS scientists estimate that the groundwater table in the SWSD will decline from natural

conditions between 20 inches and 5 feet. They further estimate that the cumulative impact of outfall sewering in the SWSD and in southeastern Nassau County will result in the decline of the water table of the Glacial Aquifer in southwestern Suffolk County and southern Nassau County ranging from 20 inches to 20 feet (15).

Reduced groundwater table levels will cause an overall reduction of streamflows in the SWSD between 20–25% from natural conditions due to SWSD sewering alone and 40% due to sewering programs in the SWSD and southeastern Nassau County (15). In the area which will be hydrologically affected by this sewering program extending from the Queens border on the west to Champlins Creek, on the east, nine major groundwater-fed stream systems and numerous smaller streams discharge into Great South Bay. Several of these are designated C(T), i.e., suitable for trout fishing and are stocked with trout by the NYSDEC (16). As a result of the hydrologic effects of outfall sewering, these streams will shrink in length (15) and they will become considerably less viable as trout fishing streams than at present (16). Furthermore, we have determined that within and contiguous to the nine major streams alone there are approximately 1500 acres of fresh water wetlands (17). The vegetation of these wetlands is dependent on the height of the groundwater table. Declines in the water table will therefore predictably have a severe adverse effect on these wetlands.

Significant reductions in freshwater flows to Great South Bay will significantly increase salinities in affected portions of the Bay (18). Our analysis indicates that the salt water intrusion induced by outfall sewering in Great South Bay will be similar to those observed impacts brought about by the drought of the 1960's. As a consequence of that drought, salinities rose by some 3 parts per thousand in many parts of the Bay (19). These increases in salinity adversely affected shellfish spawning and the growth and survival of juvenile shellfish (19, 20). Great South Bay also witnessed an unprecedented invasion by starfish, a major shellfish predator. As an aftermath of the drought, in very crude terms, shellfish productivity was reduced by some 50% (19, 20). Thus, outfall sewering in southern Nassau and Suffolk Counties may reduce shellfish productivity in affected portions of the Bay by a comparable amount. In view of the fact that the Great South Bay shellfish industry harvests some 50% of the hard clam production in the country (13), is said to be a $100 million industry and employs several thousands of persons, this environmental and economic impact is considerable (19).

INSTITUTIONAL AND LEGAL PROBLEMS

Although the adverse environmental effects of the SWSD and other comparable projects will be significant, they have never been properly identified and evaluated. For example, the July 1972 program EIS on Waste Water Treatment Facilities (2) prepared by EPA says nothing about the impact of these projects on freshwater wetlands, the biota of Great South Bay, the significance of the shellfishing industry of Great South Bay and the predictable impact of the project on that industry (19). The failure to evaluate environmental impacts as required by NEPA, is a basic reason why we are confronted today with fundamental predicaments in the SWSD.

The inadequacy of the environmental analysis for the SWSD, as well as many other wastewater projects in the county, results in part from a failure to place facilities planning in an overall environmental management context. This also contributes to inadequate analysis of alternatives. Institutionally, it may result from the fact that personnel employed in the construction grants program of EPA and NYSDEC play a more important role in designing and reviewing projects such as the SWSD facility than personnel in the planning or environmental impact analyses branches of these agencies (22).

Institutionally, furthermore, EPA, as the operating agency, has had little incentive to heed the advice or requests of other federal agencies which have expertise in identifying and evaluating fish and wildlife issues. The Fish and Wildlife Service, the National Marine Fisheries Service and the National Park Service, have written EPA and the Army Corps of Engineers repeatedly since early 1972 about the environmental complexities of wastewater management in groundwater areas and the adverse environmental impacts inherent in outfall sewering in Long Island, including the SWSD (23, 24, 25, 26, 27, 28). At worst, EPA has ignored the potential severity of these problems, despite warnings from sister agencies. At best, EPA's response has been that construction and use of outfalls are necessary, even if they do great harm, because no other alternatives are available.

In turn, therefore, we must ask why is it that alternatives, which can mitigate groundwater pollution from cesspool-septic wastes while avoiding significant adverse hydrologic-ecological effects, are not available, if we accept, *arguendo*, this position.

A limitation on alternative wastewater strategies, such as recharge, available for evaluation, may arise in part from the inadequacy of program funds to support water resource management planning and research efforts. Although the 1972 Amendments called for "a major research and demonstration effort . . . to deveolp technology necessary to eliminate the discharge of pollutants" (29) into receiving waters and stated as a matter of national policy that "areawide waste treatment management planning processes be developed and implemented (30), the Act also called for and appropriated massive federal financial assistance for the construction of waste treatment works (31). Thus, a multibillion dollar public works construction program was accelerated relying upon conventional technological processes that existed prior to 1972, without the benefits of areawide planning or the results of major research and demonstration efforts. This problem has been intensified by the delay in the implementation of the 208 program and by the pitifully small scale of EPA's research and development effort under the 1972 Amendments. Because of the lack of research and demonstration projects, local water managers are given very few options with which to develop wastewater management programs. This is certainly true of Long Island.

The absolute number of dollars spent on advanced wastewater treatment research has declined from $12.7 million in 1968 to approximately $6.3 million in 1976 (32). These funds are for research intended to implement Section 201 of the 1972 Amendments which calls for "the development and implementation of waste treatment management plans and practices which will achieve the goals of this Act" and which: ". . . shall provide for the application of best practicable waste treatment technology before any discharge into receiving waters, including technology before any discharge into receiving waters, including reclaiming and recycling of water, and confined disposal of pollutants . . ." (33)

In contrast, the construction grants program grew form $203 million in 1968 to $4 billion in 1975 and more than that in fiscal year 1976. Thus, research monies have declined while construction grants have increased. The annual EPA research budget for wastewater effluent land application systems is also small, currently about $900,000 (34), and clearly inadequate to construct, operate and evaluate demonstration projects. Similarly, EPA's research for stormwater pollution control has been reduced from $6 to $1.8 million per year around 1970 to less than $1 million in fiscal year 1976 (35).

Similarly, research and demonstration activities to improve the efficiency and effectiveness of individual residential subsurface systems have also been minimal, despite the fact that Section 104(g) of the 1972 Amendments calls upon EPA to: "conduct a comprehensive program of research and investigation and pilot project implementation into new and improved methods preventing, reducing, storing, collecting, treating, or otherwise eliminating pollution from sewage in rural and other areas where collection of sewage is conventional, community-wide sewage collection systems is impractical, uneconomical or otherwise infeasible . . ."

Recently, EPA's overall research program has been severely criticized for offering only short-terms solutions to massive long-term environmental problems by the United States Congress Office of Technology Assessment (36). In our own lawsuit, we have been told repeatedly by EPA that the feasibility of recharge by advance waste treatment, land application, improved management of individual systems or other methods in a groundwater area has not been demonstrated because of lack of demonstration projects and possible health related contaminants in renovated wastewater. Although we consider these problems to be manageable and recharge to be feasible (37, 38, 39), if *arguendo*, they are not, these research-demonstration budgets don't begin to be adequate.

This lack of adequate research has limited the development of cost effective technology necessary to implement the goals of the 1972 Amendments (32). When it comes to research and development for municipal wastewater pollution control, the leadership must necessarily come from the federal level.

Part of the problem is that Congress and EPA appear to have thought in 1972 that we had the technology to control water pollution. However, experience both under the 1972 Amendments, as well as the Clean Air Act, suggests that there is no way to tack on control technology to an inherently polluting system, relying

on energy and intensive end-of-the-pipe treatment which in large part only transfers the pollution problem to another arena (40, 41). The only way to move to non-polluting systems, as required by Section 201 of the 1972 Amendments (42), is to fund the necessary research and development efforts. Unfortunately, just the opposite has occurred.

Thus, in the SWSD we find an ongoing commitment to the use of conventional technology which is simply not designed to cope with the complex water quality problems at hand.

Furthermore, EPA takes the position that the 1972 Amendments do not grant it authority to control point discharges into ground water (43). Because of the limited definition of "injection wells" in the Safe Drinking Water Act (44), at the present time there is no comprehensive federal program to control pollution of groundwater by most point source discharges. In part for this reason, there is almost no federal or state program to control the installation of or monitoring effects of new subsurface residential subsurface systems. This jurisdictional problem is compounded by the fact that EPA and NYSDEC and, to some degree, the 1972 Amendments themselves, fail to make appropriate distinctions between the wastewater management problems of surface water areas and groundwater areas. For example, although the generic-1977 "secondary treatment" requirement (45) may make some sense for some surface water areas, it makes little sense for groundwater areas since secondarily treated wastewater is generally considered unsuited for recharge. As a consequence, the 1972 Amendments serve as an inducement to "solve" groundwater pollution problems by way of disposal of wastes through outfalls into coastal waters, a disposal system which plays havoc with natural hydrologic cycles.

If the objective of a wastewater management program is to protect Long Island's water supply, a watershed management program, designed to control or limit development in key recharge areas, might achieve that objective far more effectively than massive sewering. Recent evidence suggests that street and urban runoff and other non-point sources of pollution are significant sources of pollutants, including toxic substances (8, 9, 10, 11, 12, 13, 38). However, neither the 1972 Amendments nor the Safe Drinking Water Act authorizes grants of federal monies to acquire or otherwise gain public control of recharge area watershed lands in order to protect public water supplies at source. These statutes have a "technological-fix" bias which cannot help but prejudice local decisions towards structural solutions. Furthermore, although federal monies and state monies can be made available to acquire lands for recharge purposes (46), administratively it is very difficult for Suffolk County or any other local area to obtain such funding for the acquisition of recharge areas preemptively before development precludes use of such lands and before detailed facilities planning has been completed and approved.

ALTERNATIVES

Since the environmental impacts of the SWSD as presently designed have never been properly identified and evaluated by the appropriate agencies, comprehensive evaluation of the present project relative to alternatives is difficult. In our view, an adequate analysis of the environmental impacts (15, 16, 17, 18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 47, 48, 49, 50) of SWSD outfall sewering would point to the desirability and necessity for a recharge management and/or watershed management program. Further, an adequate analysis and evaluation of the importance of sources of contamination of the groundwater would point in the direction of a stormwater management program (8, 9, 10, 11, 12, 13, 38).

Given the data available to us, alternatives to the SWSD plant and outfall which would mitigate the potential adverse environmental impacts of the project include: (1) redesign of the SWSD as a recharge management system, incorporating certain features of the present project, supplemented by immediate identification and acquisition of or other means of control over inland recharge areas, stream augmentation, advance waste treatment and/or land application treatment processes; (2) scaling down the size of the present SWSD and improved maintenance and operation of existing subsurface systems following a re-evaluation of the projects (7), or (3) expenditures of unexpended funds on other, cost effective groundwater protection programs, such as watershed management or sewering of inland areas designed to protect important recharge areas.

Construction of the outfall without a proper analysis and evaluation of environmental impacts will predictably cause long-term environmental and economic

difficulties, impose further burdens on taxpayers and jeopardize future implementation of a recharge program.

The 1972 Amendments do allow for the additional federal funding for the SWSD as a recharge system under Section 202(b) (51). We do not understand why the responsible agencies have not made a concerted effort to implement Section 202(b) of the 1972 Amendments. That provision was inserted to provide funding specifically for the SWSD in view of the fact that construction of its collection system and implementation of recharge to avoid adverse ecological effects is very expensive, given the present design of the system. To our knowledge, EPA has not included in any budget proposal specific funding to fulfill the mandates of Section 202(b). Section 202(b) funding will increase the number of management alternatives in the SWSD, while easing tax burdens on local taxpayers.

REFERENCES

1. Petition of the Environmental Defense Fund for Preparation of Environmental Impact Statement, June 29, 1971 before the Office of Water Quality, Environmental Protection Agency.
2. Environmental Impact Statement on Waste Water Treatment Facilities Construction Grants for Nassau and Suffolk Counties, New York. Environmental Protection Agency, Region II, July (1972).
3. The National Environmental Policy Act, 42 U.S.C. §§ 4321, et seq.
4. 33 U.S.C. §§ 1251 et seq.
5. Letter from Environmental Defense Fund, Setauket, New York, dated July 16, 1974 to the Honorable Russell E. Train, Administrator, Environmental Protection Agency, Washington, D.C. and Mr. Gerald Hansler, Regional Administrator, Environmental Protection Agency, Region II.
6. Complaint, Civil Action No. 74–C–1698 (E.D.N.Y. December 3, 1974), *Environmental Defense Fund, et al.* v. *Train, et al.*
7. Lambert, Richard G. 1976. Report of the Special Committee on Technical Aspects of Southwest Sewer District. Suffolk County, New York.
8. Slimak, Karen M., Robert H. Harris. 1976. Preliminary Analysis of Organic Chemicals and Heavy Metals in Existing and Potential Recharge Waters. Versar, Inc., Springfield, Va.
9. Shaheen, Donald G. 1975. Contributions of Urban Roadway Usage to Water Pollution. Biospherics Inc. for the U.S. EPA. Environmental Protection Technology Series, EPA–60012–75–004.
10. Colston, Newton V., Jr., 1974. Characterization and Treatment of Urban Land Runoff. EPA, Office of Research and Development, December, 1974. EPA–607/2–74–096.
11. Pitt, Robert E. and Amy, Gary, 1973. Toxic Materials Analysis of Street Surfaces Contaminants. U.R.S. Research Company for the U.S. EPA, Environmental Protection Technology Series, EPA–R2–73–283.
12. Sartor, James D. and Boyd, Gail B. 1972. Water Pollution Aspects of Street Surface Contaminants, U.R.S. Research Company for the U.S. EPA, Environmental Protection Technology Series, EPA–R2–72–081.
13. Jensen, Albert C. 1973. Managing Shellfish Resources Under Increasing Pollution Loads. Proceedings of the Gulf and Caribbean Fisheries Institute, 26th Annual Session, October, 1973.
14. New York State Tidal Wetlands-Land Use Regulations. Draft for Public Hearing Purposes, Section 661.6(a)(2). Section 661.6(a)(3) also provides for a minimum of 2 feet of soil beneath the cesspool.
15. Kimmel, Grant E. and Arlen W. Harbaugh. 1975. Analog-model Analysis of Hydrologic Effects of Sewerage in Southeast Nassau and Southwest Suffolk Counties, Long Island, New York. United States Department of Interior—Geological Survey, Open File Rpeort 75–53.
16. Deposition of Mr. Anthony S. Taormina, Director, Division of Marine and Coastal Resources, New York State Department of Environmental Conservation dated Sepatember 17, 1975.
17. Beitel, Joseph. 1976. A Vegetative Survey of the Freshwater Wetlands of Nine Major Streams in Southwestern Suffolk County and Southern Nassau County, New York. Environmental Defense Fund, Setauket, New York.
18. Moskowitz, Paul D. 1976. An Analysis of Salinity Variations Within Great South Bay, New York. Limnol. Oceanogr. 21: 740–743.
19. Affidavit of Mr. Stephen G. Lane, Sayville, New York, dated October 2, 1975.
20. Affidavit of Mr. Nelson Slager, Sayville, New York dated October 6, 1975.

79–172—76——5

21. Report—Comprehensive Public Water Supply Study, Suffolk County, New York CPWS-24. Prepared by Holzmacher, McLendon and Murrell—Consulting Engineers, Melville, New York 1970.
22. Fensterstock, J. C. and D. M. Speaker. 1974. Use of Environmental Analyses on Wastewater Facilities by Local Government. EPA-600/5-74-015.
23. Letter from the Fish and Wildlife Service, Washington, D.C. dated March 6, 1972, to the Director of the Office of Environmental Project Review and the Office of the Assistant Secretary—Program Policy Assistant, Washington, D.C.
24. Letter from Mr. P. A. Buckley, Chief Scientist, North Atlantic Region, National Park Service, Boston, Mass., dated October 20, 1975 to Mr. Gregory DeSylva, Environmental Impacts Branch, Environmental Protection Agency Region II.
25. Letter from Mr. William G. Gordon, Regional Director, National Marine Fisheries Service, Gloucester, Mass., dated January 27, 1976 to Mr. Gerald Hansler, Regional Administrator, Environmental Protection Agency, Region II.
26. Letter from Mr. Robert H. Shielolp, Acting Regional Director, Fish and Wildlife Service, Boston, Mass., dated March 4, 1976 to Mr. Gerald Hansler, Regional Administrator, Environmental Protection Agency, Region II.
27. Letter from Mr. William G. Gordon, Regional Director, National Marine Fisheries Service, Gloucester, Mass., dated May 26, 1976, to Colonel Thomas C. Hunter, Jr., District Engineer, Corps of Engineers, New York District.
28. Letter from Mr. William C. Ashe, Acting Regional Director, Fish and Wildlife Service, Boston, Mass., dated August 3, 1976 to Col. Thomas C. Hunter, Jr., District Engineer, Corps of Engineers, New York District.
29. Section 101(a) of the 1972 Amendments, 33 U.S.C. § 125(a)(6).
30. Section 101(a)(5) of the 1972 Amendments, 33 U.S.C. § 1251(a)(5).
31. Section 101(a)(4) and 207 of the 1972 Amendments, 33 U.S.C. § 1251(a)(4) and 1287, and 40 CFR § 35.910-3 to § 35.910.5.
32. Overview of the Advanced Waste Treatment Research Activities of the Municipal Pollution Control, John J. Convery, Acting Director, Advanced Waste Treatment Research Section, Environmental Protection Agency, Cincinnati, Ohio, July 1975.
33. U.S.C. §1281(a) and (b).
34. Personal communications with personnel, EPA, Robert Kerr Laboratories, Ada, Oklahoma. This budget includes about $600,000 for extramural work and $300,000 for intramural staff in the first four quarters of fiscal year 1976. The budget has been at or near this level for the last three or four years, except fiscal year 1975 when Congress appropriated a one-time supplemental fund of $2.5 million.
35. Personal communications with personnel, EPA laboratories, Edison, New Jersey. The EPA four-quarter 1976 fiscal year extramural budget is about $729,000 and intramural budget is for $230,000 for storm water pollution control research and demonstration projects.
36. A Review of the U.S. Environmental Protection Agency, Environmental Research Outlook FY 1976 through 1980, U.S. Congress Office of Technology Assessment, August, 1976. OTA-E-32.
37. Affidavit of Dr. Robert H. Harris, Washington, D.C., dated October 29, 1975.
38. Harris, Robert H. 1975. Water Quality Management on Long Island: A Case for Recycling Municipal Wastewater by Ground Water Recharge. Environmental Defense Fund, Setauket, New York.
39. Affidavit of Dr. Samuel Fogel, Cambridge, Mass., dated October 16, 1976.
40. Affidavit of Dr. Holger W. Jannasch, Woods Hole, Mass., dated September 12, 1975.
41. Woodwell, G. M., 1974. Letter to the Editor. *Scientific American* (Vol. 231, No. 3).
42. U.S.C. § 1281(a) to (d).
43. See *U.S.* v. *GAF*, 7 ERC 581 (S.D. Tex., February 5, 1975).
44. Section 1421 of the Safe Drinking Water Act, 42 U.S.C. § 300h and EPA proposed regulations, 40 CFR Part 35, 41 F.R. 36726 (August 31, 1976).
45. Section 301(b)(1)(B) of the 1972 Amendments, 33 U.S.C. § 1311(b)(1)(B).
46. 40 CFR § 35.925-18 and Section 212(a)(A) of the 1972 Amendments, 33 U.S.C. § 1292(2)(A).

47. Letter from Mr. Donald Swift, Marine Geology and Geophysics Laboratory, Miami, Florida, dated June 17, 1975 to Mr. Robert Carl Olsen, Environmental Protection Agency, Region II.
48. Letter from Mr. Richard L. Caspe, Chief Construction Grants Section Environmental Protection Agency, Region II, dated July 1, 1975 to Mr. John V. N. Klein, Suffolk County Executive.
49. Affidavit of Mr. Dennis Puleston, Brookhaven, New York, dated October 17, 1975.
50. Affidavit of Dr. Anthony E. Cok, Jamaica, New York, dated October 21, 1975.
51. Section 202(b) of the 1972 Amendments, 33 U.S.C. § 1282(b).

A Consideration of the Southwest Sewer District

(By John A. Black, Long Island Audubon Council, North Fork Environmental Council)

The Southwest Sewer District, the largest and most costly public works project in the history of Suffolk County, will not only fail to solve environmental problems in a cost effective manner but will, in reality, be environmentally detrimental. Suffolk County is solely dependent on its groundwater resources for its domestic water. It is anticipated that the Southwest Sewer District will not only fail to upgrade the water quality of the aquifers appreciably, but will also reduce the water quantity to an extent sufficient to destroy much of our fresh water resources.

As noted above the subsurface aquifers are the sole source of fresh water on Long Island. These aquifers receive water via the recharge of rainwater, which percolates into the ground and enters the aquifers. Of the 44 inches of precipitation it is estimated that approximately 50% actually enters these aquifers.

There are three major aquifers underlying Long Island: the Glacial, the Magothy and the Lloyd. The Glacial Aquifer is the shallowest; water recharged to this aquifer to the south of the moraine tends to move laterally in a southerly direction toward the Great South Bay. When the Glacial Aquifer intercepts the surface it forms fresh water seeps, bogs, streams, rivers and lakes. Thus the total precipitation entering the aquifer via precipitation is not available for domestic use. A portion of the Glacial Aquifer enters the marine environment as subsurface springs. Glacial water is also brought to the surface by shallow wells to provide water for a number of homes on Long Island. A portion of the water in the Glacial Aquifer also tends to move vertically and recharge the Magothy Aquifer along the central moraine.

The Magothy Aquifer lies below the Glacial and, as above mentioned, receives water from the Glacial. The area of most efficient recharge is in the central portions of the island in the vicinity of the moraine. The water in the Magothy south of the moraine, also tends to move laterally toward the Great South Bay. The Magothy Aquifer provides the majority of domestic water in the western portions of Suffolk County, A portion of this water also tends to move vertically and recharge the Lloyd Aquifer.

The Lloyd is the deepest aquifer on Long Island. At present its use is restricted by the New York State Department of Conservation to areas where salt water intrusion has contaminated the upper aquifers. It is to be noted that all three aquifers are interconnected by vertical flow—primarily in the central portions of Long Island.

Prior to the building boom of the fifties it appeared that dilution would be sufficient to offset contamination. In other words, with a low population density and only a minimal portion of the island covered by impermeable surfaces (roads, parking areas, etc.), the contaminants from cesspool seepage were sufficiently diluted in the aquifer and, for the most part, the Glacial Aquifer was of sufficient water quality to provide water for much of Long Island. As population density increased and more land area was paved, asphalted, etc., water quality of the Glacial Aquifer began to decline drastically. This was due, in part, to the increased cesspool density. However one must not overlook the other sources of aquifer contamination—namely landfill sites, agricultural and residential fertilizers and pesticides, as well as recharge basins accepting runoff from roadways, etc. It is also to be noted that much of the building on Long Island occurred during the drought (1962–1966) when groundwater levels were at their lowest. Thus many builders erected houses in areas that in non-drought years would be wet. These

types of building practices must be kept in mind when considering some of the peculiar problems of the Southwest Sewer District.

As water quality of the Glacial Aquifer continued to decline it became common practice to exploit the Magothy as a source of uncontaminated water. As this occurred, water was taken from the deeper aquifers, used, contaminated and released, via cesspool seepage, into the Glacial. Thus water was taken from one aquifer, contaminated and released, along with the above mentioned additional sources of contamination, into the Glacial Aquifer. This hastened the decline of water quality in the Glacial. As the Glacial continued to decline in quality, so did the streams, lakes, etc., which were fed by Glacial water. In addition submarine springs were bringing in low quality Glacial water to the marine environment. It is to be stressed, at this point, that cesspool leachate is only a portion of the total problem. As noted previously landfill sites, runoff, etc., contribute and will continue to contribute significantly to the total problem.

Pumping water from the Magothy Aquifer and releasing it into the Glacial also brought about an additional problem—that of drawdown. As water is removed from the Magothy the water pressure in this aquifer is reduced. This is known as a reduction in the hydrologic head. As the water pressure of the Magothy decreases an increased vertical flow from the Glacial occurs. Since the Glacial is contaminated, however, reduction in the hydrologic head serves to hasten the contamination of the Magothy.

The Southwest Sewer District proposes to sewer an area from the Southern State Parkway south to the Great South Bay. The majority of the water used in this area is from the Magothy. This water will be taken to the treatment plant, after use, subjected to secondary treatment and will then be released to the marine environment. The rationale given is that this district will increase the domestic water quality, improve the water quality of the fresh water systems within the district, improve the quality of the Great South Bay and in the southern portions of the district, solve the cesspool overflow problems—at a cost of over $1 billion.

The Southwest Sewer District will fail to appreciably improve the water quality since, as noted previously, the zone of maximum Magothy recharge is in the center of Long Island along the moraine. This area is, for the most part, unsewered. Consequently the cesspools and septic tanks located in this region will continue to add material to the Glacial Aquifer. Since this is the zone of maximum recharge into the Magothy, these contaminants have the highest probability of entering the deeper aquifers in this area. The collection system, located far to the south, will have virtually no effect on improving Magothy quality.

The Southwest Sewer District will not improve surface fresh water quality. Since this district will release 30 mgd of secondarily treated waste water to the marine environment it will tend to decrease groundwater levels in the central portions of the island. This reduction in Glacial water will directly affect the surface fresh waters in the area by decreasing stream flow, lake levels, etc. That this is a real concern is illustrated by the Suffolk County Department of Environmental Control's tentative plans for stream augmentation of the Carll's River. Unfortunately, according to John Flynn, federal monies have not been allocated for stream augmentation. Therefore it is recommended that stream augmentation, along with recharge per se, be considered as an alternative to the destruction of surface fresh water systems. If stream augmentation is undertaken, however, it must be carried out with the intent of preserving all, or at least the most significant, fresh water systems within the district and not only the most obvious system—namely the Carll's River system. In addition it is to be stressed that the water used in this process must be Class "C" water or better.

The Southwest Sewer District will not, in all likelihood, improve the water quality of the Great South Bay to any appreciable extent since many other sources of water contamination will continue unabated. In addition the outfall will release 30 mgd of secondarily treated waste water into the Atlantic Ocean. This will have a deleterious effect on the marine environment in this area and will further increase the possibility of beach contamination in the future.

In conclusion the Southwest Sewer District will fail to significantly raise the water quality of the aquifers and will, in fact, deplete these aquifers. This will, as noted previously, lead to the destruction of fresh water systems. Consequently this district is an extremely expensive project with little, if any environmental benefit, as presently conceived. Activity on this project should be confined to only those areas presently under construction or those projects that have been funded to date. The district should simultaneously be reevaluated in terms of scope, recharge and/or stream augmentation and redesign to either reduce the costs, increase the environmental benefits, or both.

Mr. AMBRO. Mr. Moskowitz.

Mr. MOSKOWITZ. I think, Mr. Black will go first.

Mr. TRIPP. Let me say since we have submitted statements if you want to open it up to questioning right away, I think that is agreeable.

Mr. AMBRO. Go ahead.

Mr. BLACK. Just to summarize, we feel that the Southwest Sewer District will fail to solve environmental problems in a cost effective manner, which is what we have been hearing all day. We also feel it will be environmentally detrimental because it will fail to upgrade the quality of the groundwater and it will, in fact, reduce the groundwater quality and destroy various fresh water resources within the Southwest Sewer District.

Just briefly to more or less summarize what Mr. Guerrera tried to point out this morning, the Magothy is the major source of the domestic water in the southwest sewer district and the zone of maximum recharge is toward the central portion of the island, along the terminal moraine, which is virtually unsoiled and subject to not only cesspool and septic tank contamination, but also fertilizers from home use, pesticides from home and agricultural use, nonpoint sources, some recharge basins.

Mr. WRIGHT. The Magothy formation is vulnerable and susceptible to this kind of intrusion?

Mr. BLACK. Definitely, especially along the central portion of Long Island; along the central spine of the island is where the majority of the water gets down into the Magothy and, as Mr. Guerrera pointed out, that is the portion of the water that is not going to be sewered by the Southwest Sewer District.

The water from the central portion of the island, talking about the area where we are considering, tends to move southward toward the Great South Bay.

My own feeling and the feeling of many people is that by not sewering the central portion of the island or by constructing the correction where it is far south of the zone of maximum recharge, you are not going to upgrade the water quality of the Magothy to any appreciable extent.

In addition to that, by pumping the water from the magothy you will in all likelihood cause what they call drawdown from the glacial. More water will be leaching from the Glacial when entering the Magothy. This will lead to the reduction in the water tables from about 3 to 4 meters. That will cause a reduction in stream flow and a reduction in our lake levels, our stream levels, and our fresh water levels.

Mr. WRIGHT. If I might, I will interrupt for another question, Mr. Black.

Perhaps I did not quite completely understand what Mr. Guerrera had said. I got the impression from him that it took so long for these waters to intrude into the Magothy formation that he felt that it was not vulnerable to this kind of intrusion and the supply being drawn from the magothy water probably was not susceptible to the dangers of this kind of intrusion from the septic disposal and so forth into the glacial formation.

I do not believe that is your contention. You feel otherwise, I think.

Mr. BLACK. Well, basically what I am saying here is that if you are going to construct a collection system to preserve the Magothy, and

that is basically the reason we are doing this, we are having contaminated drinking water, so forth and so on, that was the original rationale.

If a collection system is going to be built to preserve the Magothy or upgrade the Magothy, the place to do it is not along the south shore of Long Island, but along the moraine.

Mr. TRIPP. Mr. Wright, I think what Mr. Guerrera is saying is it takes hundreds of years for water to recharge in the middle of the island and to get down to the Magothy and down to the south shore. It does not take near that long.

I think water quality data from the Suffolk County Water Authority establishes that a contamination of the Magothy aquifer is taking place in the middle of the island at the present time. This is certainly true in Nassau County.

Mr. WRIGHT. Well, then, if you could start all over again and design a system expressly for this area, what would you do?

Mr. BLACK. Not to sound like a radical environmentalist, but to start all over again would be very hard.

Mr. WRIGHT. I understand.

Mr. BLACK. There is a very high population density and so forth. If you were going to start all over again, I would assume you would start over in the middle of the island and build your collection system there.

Mr. WRIGHT. I see.

That would have been your optimum solution?

Mr. BLACK. Right.

Well, it would have been a solution. I do not want to say it would be the optimum solution.

Mr. WRIGHT. What would be your optimum solution?

What would be the best way and most cost-effective way to achieve the maximum benefit to the living environment?

Mr. BLACK. Well, philosophically I fail to see why we have to spend $641 million, excluding interest, on constructing pipes or laying pipes and constructing sewer plants.

This is a philosophical discussion now.

Philosophically, $641 million, to my way of thinking, could have been much better spent in preserving the watershed originally. In other words, buying up tracts of land along the terminal moraine and leaving them undeveloped.

Mr. WRIGHT. Keeping people from moving out here?

Mr. BLACK. Right.

Mr. TRIPP. Just in that area.

Mr. BLACK. Right in that area. In the sensitive area. In the area that is subjected to maximum Magothy recharge.

Now, since that has not been done, it would be very hard to move the Long Island Expressway industrial parks.

At this stage, most likely, if you were sincerely interested in cleaning up Magothy water, the collection system should be located up toward the central portion of Long Island.

Mr. TRIPP. If I again may just add something, Mr. Black has talked about watershed management.

Most of the surface water supply systems in New England and many other parts of the country—I know this is true of Arkansas and a lot of the west coast—have significant watershed protection pro-

grams. These water utilities are on tens of thousands of acres of land.

This was done in the latter part of the last century. This would protect the watershed so the water that fell there would not become polluted.

Mr. WRIGHT. I do not really quite understand what you are saying.

You're saying to buy up sections of land and just keep it pristine and do not let anybody move there?

Mr. TRIPP. That is done in many parts of the country. It has been done since the 19th century as being an effective way of preventing pollution.

That does not mean you buy all the land. What you do is designate your most significant parts of your basin area, your drainage area, or your recharge area, and you protect that land.

You asked Mr. Black what is a cost effective approach. If you could identify the recharge areas for the Magothy aquifer or parts of the glacial aquifer, which are most important, it might be a far cheaper way of protecting the water supply and it would not affect population densities elsewhere on the island.

Mr. WRIGHT. Then what would we do with the sewage from the people that live in other parts of the area?

Mr. TRIPP. You would not have to worry so much about their sewage, however it was disposed of, polluting your water supply.

Mr. WRIGHT. All right.

So you think that might be then an idea?

Mr. TRIPP. That might.

Mr. BLACK. That might have been an idea.

I think, frankly, to speak of that now, especially in the area of the Southwest Sewer District and the more densely——

Mr. WRIGHT. People already live in those areas?

Mr. BLACK. Right. Right.

There are still some large tracts, but for the most part it would probably prove a very workable solution now for Eastern Brookhaven on out east.

I think we ought to think what we are doing in the Southwest Sewer District. I think we ought to think about dropping water table levels so that our streams and our fresh water environments effectively are not going to be destroyed by the system.

I was a little disappointed to hear you mention in the course of this hearing that we really could not count on any further Federal funding.

Mr. WRIGHT. I did not say that. I said I would not encourage you to anticipate a higher percentage of Federal funding.

We would like to see it happen, but I do not want to be guilty of giving you false encouragement.

Mr. BLACK. Right.

But to go on to my point, I think we are confronted now with a system that is under construction. I think the first thing we ought to think about now today is how we are going to preserve our freshwater environment. That should be one of the first things.

Mr. Flynn has mentioned many times the stream augmentation program for the Carll's River. He has also mentioned there is no Federal funding available for this. I do feel that stream augmentation is not an alternative, but something that should seriously be considered by this committee.

Mr. WRIGHT. Stream augmentation.

You would allow the treated effluent to go into this stream to augment flows downstream?

Mr. BLACK. Right.

As you drop water table levels, your stream flow, your adjacent freshwater wetlands, et cetera, are going to suffer. There has to be a way to maintain the stream flow, maintain the water levels upstream, so that you can maintain the freshwater wetlands.

I would strongly recommend that we do consider seriously some mechanism of stream augmentation; but I do want to stress that the only stream augmentation that Suffolk County D.E.C. is talking about is for the Carll's River and primarily, in my opinion, for cosmetic purposes.

It is the largest river. It flows through Belmont Lake State Park. It exits in the town of Babylon where all the brides get their pictures taken on their wedding day, that type of thing.

I would recommend that the major water systems be considered for stream augmentation, not just the Carll's River.

Mr. WRIGHT. You say Suffolk County D.E.C. What is this, now?

Mr. BLACK. Department of Environmental Control.

Mr. WRIGHT. If you had your way right now, the three of you, given what has already happened, recognizing the point at which Suffolk County and the Southwest Sewer District and citizens of Long Island have arrived at, what would you do?

Mr. BLACK. Basically, what I would recommend is definitely consider stream augmentation.

Mr. WRIGHT. Instead of pumping it all out into the ocean, you would pump some of it into the streams?

Mr. BLACK. As necessary. Right.

I think you will find that during drought years you may have to point as much as 10 million gallons a day to the various streams in order to maintain stream flow.

Mr. WRIGHT. You are talking now about the stream?

Mr. BLACK. I am talking about sewage that goes to the plant, is treated, and probably meets at least class C water standards and then is taken from the plant upstream, up the various streams, and then released to augment the stream flow.

Mr. WRIGHT. Upstream by means of what?

Mr. BLACK. Force mains.

You would have to pump it upstream.

Mr. TRIPP. I would like to answer that question, if I could, in a somewhat different way.

The law, the 1972 amendments, has as an objective the maintenance and restoration, biological and chemical and physical restoration, of our waters.

We do not understand the point of vesting large sums of money that is going to deteriorate streams and deteriorate the quality because of the salt water intrusion.

Generally, what we would recommend is:

One: Some system of compensation.

You have to have some way of sustaining the cycle so these adverse effects do not happen.

Two: I would like to point out one of our concerns, at least as far as we are concerned, is that the environmental impact of this project has never been properly assessed. Therefore, it is very hard to say specifically what should be done.

Three: I try to make this point in our statement. Whenever you are asked for what you can do, we respond with recharge or the stream augmentation, and we are constantly told these things are not feasible. There have been no demonstration projects. It has not been shown it can happen.

One of the principal concerns in the way this law has been implemented or construed by EPA has been the very low level of funding and very low budgetary allocations in the EPA budgets for research and demonstrations. It is less than $1 million a year. There is less than $1 million going into land application work. There is less than $1 million going to research. There is very little money going into trying to improve the quality and efficiency of the individual home surface systems.

In view of this fact, how can we respond to this?

It is 4 years after the act was passed. We are spending billions of dollars a year in these treatment plants and I have talked repeatedly to EPA scientists. They know what the problem is. I have talked to engineers and they say there are no demonstration projects.

Ninety-nine and nine-tenths percent of the sanitary engineers in this country will not design a project unless it has been proved on a full-scale level. I think that is one of the great problems.

Mr. AMBRO. Just beyond that, to augment the record, the low level of funding has been completely used by EPA.

Mr. TRIPP. That may be true.

I am not here to assess who bears the responsibility with it, whether it is OMB, EPA, and so on. I say it is simply a fact. There is almost zero EPA money at the present time for research.

Mr. WRIGHT. On another point, Mr. Tripp, you mentioned the amounts and purposes of the 1972 law with respect to biological purity of the waters and the streams.

I think you probably are aware that this project originally was applied for and a grant approved prior to the enactment of the 1972 law.

Mr. TRIPP. I am aware of that fact. I believe the predecessor act had a similar kind of objective.

Mr. WRIGHT. Well, the fundamental objective was quite the same; to clean up the streams. The 1965 law, under which the application was made, had fundamentally similar objectives but it was not nearly as sophisticated a law.

Mr. TRIPP. That is correct: but I think we have to realize when we look at a project like the Southwest Sewer District we are dealing with here in Suffolk County and a ground water system that there are enormous complex water problems.

Here was a project basically designed to solve a particular problem, which was nitrate contamination of the ground water.

In my opinion, the only way we can design projects—I am not talking about just the southwest sewer district project, but I think it typifies a problem we have seen elsewhere in the country—is to do the research and demonstration work and do the planning work so we can design a project to cope with the complexities and the problems.

You punch the system here to deal with a problem and it comes out some place else. We have to know what is going to happen so we can constructively use this.

Mr. WRIGHT. Thank you.

Mr. BLACK. I would like to make one or two more points, if I may.

Mr. AMBRO. Mr. Black, I think we asked each person who has testified to consign their verbal or oral comments to 5 minutes. We are running way behind and I really would like you to condense it.

One of our colleagues is here. The GAO is here. The EPA is here. DEC is here. Other environmentalists are here.

I would like you to submit anything you like for the record in writing, but to condense as much as you possibly can your verbal testimony.

Mr. BLACK. Fine.

My last point here is that we have been told that the Southwest Sewer District is going to appreciably improve the water quality of the Great South Bay.

Again, what we are doing here is only handling one segment of the problem, namely, the cesspool problem. We have a lot of sources going into the bay that are not being considered in this project.

That is my last point.

We have to look at the total picture, not just the cesspool, septic tank problem.

Mr. AMBRO. Thank you.

Mr. Moskowitz, and Mr. Tripp, did you want to say a word?

Mr. MOSKOWITZ. Mr. Chairman, Mr. Ambro, thank you. I will be brief.

In the area to be hydrologically affected by the Southwest and Cedar Creek Sewage Districts, nine major stream systems and an approximate number of minor stream districts exist. The streams are 90 to 95 percent ground water fed and are thus entirely dependent upon the ground levels to maintain their viability.

Mr. WRIGHT. Fed by springs?

Mr. MOSKOWITZ. Underground springs; that's right.

Mr. WRIGHT. Not by surface runoff?

Mr. MOSKOWITZ. That is correct; just 5 to 10 percent is surface runoff.

The U.S. Geological Survey scientists have predicted that the combined effect and the hydrological effects lower the ground water tables by approximately 20 inches to 20 feet in large areas of Nassau County and western Suffolk County. This will result in a diminution of the viability of these streams to support the sport fisheries as well as the wetlands within and contiguous. Reduced stream flows will also affect the salinity region of the Great South Bay, which is supporting a valuable shellfish industry in excess of $100 million which produced approximately 50 percent of hardshell clams produced in this country annually.

All of the data available that we have looked at indicates to us that the drawdown in the water table has both significant impacts on the freshwater streams in their communities as well as the communities existing within the Great South Bay.

We have more detailed information which is contained within our prepared statement, and I think that I have nothing else to say at this time.

Mr. AMBRO. Thank you, Mr. Moskowitz. Mr. Tripp?

Mr. TRIPP. As I said a few minutes ago, one of our concerns is we think because of saltwater intrusion in the Great South Bay, there may be a significant impact on the shellfish. This problem has never been assessed and we think that is regrettable, to say the least.

We would also encourage the committee to acquaint itself with the views and comments and opinions of the U.S. Fish and Wildlife Service and National Marine and Fisheries Service on this particular problem.

I have already spoken about the shortage of research and demonstration funds.

I would like to get back finally to one other point that we were discussing earlier and that is watershed management.

If I can just sort of make a general point of evaluating the act, I think part of the problem that we find ourselves in here in Suffolk County, and I think this is true elsewhere, is you can get Federal and State moneys to do certain things, but not other things.

For instance, it is very difficult to get moneys to acquire large chunks of land for recharge purposes in a timely enough fashion before development occurs.

For instance, if Suffolk County now wanted to acquire recharged lands for some kind of future land application system before development takes place, they would have to do it now before they do a detailed facilities plan. As far as I know, there is also no land available for protection of the water supply. I think more flexibility in that regard would be of benefit.

Thank you.

Mr. AMBRO. Well, we thank the three of you. We appreciate you coming and your testimony.

If you would like to have, through a written statement, anything to augment what you said, we would be happy to have it.

Mr. TRIPP. We appreciate this opportunity to appear.

Mr. AMBRO. I would like to depart a bit from the schedule. I did say that we had another panel. I would like to move, however, to call on one of our colleagues, Representative Tom Downey, who represents most of the Southwest Sewer District, who through his efforts has elevated the consciousness of the entire Congress to the problem.

This subcommittee is deeply indebted to Tom Downey for his cooperation, his input, his concern, and all of the work he has done with respect to this.

We are delighted, Tom, that you can take the time to come before us and make a statement.

Mr. WRIGHT. Mr. Chairman, at this point, may I simply add emphasis to what you have just said. Mr. Downey has been extremely diligent in bringing to the attention of this subcommittee the problems with respect to this immediate area and this immediate project.

While his contributions to the Congress most certainly are not limited in any sense to this particular concern, he certainly is not in any degree lacking in the diligence he has pursued in this concern.

I look forward to your testimony.

TESTIMONY OF HON. THOMAS J. DOWNEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. DOWNEY. Mr. Chairman, I would like to thank the subcommittee for this opportunity to appear before you here today. I would also like to compliment the subcommittee for its efforts and fine work in pursuing this inquiry. And, finally, I would like to congratulate my good friend and colleague, Congressman Jerome Ambro, of the Third Congressional District. This hearing today is a testament to his efforts, and we thank him for his interest and his dedication to this issue. I would like also to thank my good friend and colleague, Jim Wright, who I believe is without parallel as a speaker in the House of Representatives and one of its finest Members.

Mr. Chairman, my remarks will be relatively brief. I have but a single, but I believe crucial point to stress: Government must begin to talk sense to the people about the Southwest Sewer District. Government must determine the facts and tell people the truth about the project. And Government must present the people with the facts concerning this project on a regular, sustained basis.

In November 1969, the residents of the Southwest Sewer District approved a referendum proposing the sewer project. They approved the project based on the following cost estimates: (a) the cost of constructing the project would be about $269 million, and (b) the interest charges attendent to the financing of the project would raise the cost by another $252 million.

I might add at this point, Mr. Chairman, that the $252 million was the latest publicized and, in fact, many people made their decision on the basis of whether or not they were in favor or opposed to the sewer district, based on the $269 million figure alone.

Today, Mr. Chairman, current estimates place the cost of the project at $1.5 billion—almost $600 million for construction and more than $900 million in interest charges.

In other words, the cost figures presented to the taxpayers in connection with the 1969 referendum underestimated the total cost of the project by nearly $1 billion. The original cost estimates turned out to amount to only one-third of the ultimate cost of the project.

Earlier this year, I directed the U. S. General Accounting Office to conduct an investigation of the project, in an effort to determine the source of these outrageous cost increases. In my letter to the Comptroller General of the United States, I emphasized the need for an investigative body like GAO to examine the project. The GAO has prepared a preliminary report on its findings, and will appear before you shortly to testify.

During the course of its investigation, GAO held briefings for myself and my staff on some of their conclusions. One of the things that became apparent to us during these briefings was the lack of candor at the outset concerning the projected cost of this project.

The initial cost estimates presented to the taxpayers in connection with the 1969 referendum were stated in 1969 dollars. That is, the figures included no allowance whatsoever for inflation. Project planners at the time estimated that the sewer project would take at least 5 years to construct. And even in good times, inflation may run about 5 percent per year. Yet no allowance for inflation was included in the original cost estimates for the project.

How responsible public officials felt that they could honestly estimate the cost of this massive project without allowing for inflation is beyond my comprehension.

If we ever wonder why the people of Suffolk County have so little confidence and trust in their government, we need go no further than examine the unfortunate history of the southwest sewer district.

Construction costs, originally estimated at $269 million, now stand at $612 million. Most of this increase is attributable to the unaccounted-for inflation which we have experienced since 1969, compounded by the fact that the project will take about 10 years to construct, rather than the 6 years initially estimated.

But there are other sources of inflation in construction costs: the extension of the length of the outfall pipe by 66 percent, the length of time it took EPA and the State to approve portions of the project, and the method of paying for consulting engineering services. All of these points will be discussed in greater detail by GAO, in testimony which I know the subcommittee will find revealing.

Let me turn for a moment to the extent to which financing costs have been underestimated. Iu 1969, financing costs were estimated at $252 million. Since 1969, those costs have tripled. Today they stand at more than $900 million.

One of the reasons that financing costs were so badly understated is that, in 1969, it was assumed that the then maximum interest rate of 5 percent would be the maximum interest rate throughout the life of the project. Just as the original cost estimates assumed no inflation in the cost of construction, so they also assumed no inflation in the cost of money.

We all know what happened. We know in retrospect that the estimate failed to prepare the taxpayers for what was really to come.

In October 1971, the county sold $19 million in long-term bonds at an interest rate of 5.25 percent.

The county then shifted to short-term financing until December of this last year. In 1972, the county sold $18 million of 1-year bond anticipation notes, at rates ranging from 3 to 3.3 percent. These notes were renewed in 1973, 1974, and 1975 at interest rates ranging from 4.2 to 6.8 percent.

In April 1976, $54 million in bond anticipation notes were sold at 6.75 percent. In July 1976, $60 million in notes were sold by the county at 9.35 percent.

The county began to issue long-term obligations once again in November of last year. After initially receiving no bids, the issue was sold at an interest rate of about 9.8 percent. In August 1976, the county sold an additional $150 million in long-term bonds at 8.9 percent. It has been assumed that future long-term issues will be sold at about 9 percent.

GAO has made some observations about the basis for the county's decisions in this regard and I will leave detailed analysis to them. I will only point out once again the unrealistic cost estimates which were provided to the taxpayers in 1969.

Mr. Chairman, I will repeat now what I said at the beginning of my testimony: Government has got to begin to talk sense to the people of Suffolk about the Southwest Sewer District.

Cost escalations have become the trademark of this project. People have been told so many things by so many Government officials

that they just do not know what to believe any more. And at this point, Mr. Chairman, the hardship which has been caused to the people of this district by the outrageous growth of the cost of the project is exceeded only by the suffering which stems from the uncertainty about what is ahead.

People have got to know the truth about the future of the project. They need to have the facts.

Let me divert from my testimony, at this point, for a minute, gentlemen.

For the last several months, I have gone door to door and made phone calls into the district. About half of my district is included in the Southwest Sewer District. I have found, going door to door, making phone calls, a disturbing incidence of people who are literally moving from the district on the basis of erroneous information concerning the cost of the project. It is something that is deeply alarming.

People who are living on fixed incomes, for instance, who have seen press reports of cost growth, cannot translate them literally into what they are paying, and rumor is rampant that the cost of the project, for instance, for someone who has a home of full value of $30,000 will pay $400 and $500.

I have seen this firsthand.

People will not buy or build in this sewer district until Government assembles once and for all its best estimates for the future of the project, and declares that it is willing to stick by them.

People will not have faith in Government again until Government lays out a plan of action for completion of the project and pledges to stick by it.

I would propose that the county of Suffolk henceforth, at county expense, mail to each taxpayer in the southwest sewer district, on a bimonthly basis, a detailed statement concerning the cost and status of the project. People need to know the facts.

Congressman Ambro and I have discussed just yesterday a possibility of taking a package to the county executive to facilitate the mailing and disseminating of that information since we both have contiguous districts that lie within the district.

Let me close, Mr. Chairman, with some final points.

First, I am now preparing legislation which will establish limits upon the amount of time in which the State and EPA must decide whether or not to grant the required approvals for this project. The GAO has pointed out—and I am sure that they will elaborate on this point here today—that Government delay contributed to the spiraling costs of the project. This is inexcusable. If more EPA staff are needed to shorten the deadlines, so be it. I am sure that the savings in decreased construction and financial costs will exceed many times the small outlays which may be required to improve EPA staffing.

We also need more Government inspections of construction and audits of financing. I propose to this committee that EPA staffing be expanded in these areas, and especially in the area of financing. We must have a governmental body upon which we can rely for straight facts come in and audit the project on a regular basis. This will also be a part of my proposed legislation.

These steps will save the Federal Government, as well as the people of the Southwest Sewer District, great amounts of money. They are well worth the needed investment.

Finally, we reach the most important point: Federal funding. We need more help from the Federal Government for the sewer district's costs. Those of us who have been continually fighting for increased Federal support ask this committee to aid us in our efforts.

The Federal commitment under Public Law 84–660 at the present time totals $119.7 million, or 38.9 percent of the eligible costs. The State's share amounts to $92.3 million, or 30 percent of the total eligible costs. As of August 31, 1976, about $15 million had been released under this grant.

The county has also submitted a grant application under the provisions of Public Law 92–500 for lateral sewers and certain interceptors which were ineligible under the old law. The application covers $145.9 million in eligible project costs, of which the Federal share is $109.4 million.

We have tried literally everything. I have even introduced legislation to make sewer assessments tax deductible for purposes of our Federal income tax. But the bottom line is that we need whatever help and support this subcommittee can provide us.

Thank you again, Mr. Chairman, for coming from the great State of Texas and you, Mr. Chairman, from the Third District. I stand ready to answer any questions that you may have.

Mr. AMBRO. I would like to thank you, Mr. Downey, for your testimony.

A good deal of the GAO testimony will develop some of those figures which you have provided for us.

I want to thank you for your genuine concern.

The proposal that you alluded to is your proposal developed from that genuine concern about the reality of what is happening in the absence of accurate information. It is an excellent proposal. It is, of course, one that the county will have to adopt if they feel it has merit, as I certainly do.

There are a number of county legislators here. So, you see how hard that proposal flies.

I think it is certainly an excellent suggestion.

Mr. DOWNEY. It is my hope, Mr. Chairman, I might be able to sell my former colleagues on the proposal.

Mr. WRIGHT. Mr. Chairman, I want to join you in congratulating my colleague, Mr. Downey, for his deep and vital interest in this concern and for his leadership in seeking solutions.

The only caveat that I would have, otherwise it is an excellent presentation, is when you speak of the feeling on the part of the people, and surely it is understandable, that the folks in the local government have not told them the truth from the beginning about the project. Lest we be too hard on those of the county government, at the time this project had its inception in 1969, I do not suppose you or I or anyone else in this room would have anticipated that the inflation rate, which then was running at about 5½ or 6 percent annually, would have skyrocketed last year to 12 percent, annually, at one point. It would be pretty clairvoyant to know those things.

Nor, in my wildest nightmares, would I have assumed that Government bonds, starting at 5.25 percent since 1961, would skyrocket to 9 percent.

If someone had asked me in 1969 if that was going to happen, I would have said, "For heaven's sake, the Government would never let that happen."

Mr. DOWNEY. Jim, I think you make a good point.

I am not at this point suggesting that these people were not responsible.

I lived in this district and at that time in 1969, I was commuting between New York and my home. I was privy to a certain amount of the education, if you will, that the county government gave the people of the southwest sewer district concerning this project. I can tell you quite simply that at that time they thought the project would cost them $291 million and the interest rates, for instance, were not detailed. This was really, I think, a somewhat less than a candid way of explaining how this project was going to be financed and there was no mention of the fact that this project was estimated in 1969 dollars and that inflation was not included in this estimate.

One of the things that disturbs me most, is that the county government never really came forward and explained to the 250,000 people of the Southwest Sewer District this is what it is costing us.

We had public meetings. The amount of accurate information disseminated to the public, I think, was really appallingly small. I think that needs to be changed.

Having been a member of the Suffolk County legislature and having supported this project, as I still do, I understand some of the frustrations the people have.

Mr. WRIGHT. Tom, you certainly did make an excellent point there and it has a broad application. I do not want the public to become alarmed when it hears rumors.

The only antidote to that is the availability, the constant availability of the truth and factual and reliable information.

When I was a very young man, perhaps a tiny bit younger than you now, a very wise old lawyer, the city attorney in the town where I was mayor, said to me: "Jimmy, there are two mistakes you can make in public life. You ought to avoid both of them. One of them is to overestimate the public's information. In other words, to assume that they know all of these things that are available to them. The other is to underestimate the public's intelligence."

I think no wiser or safer advice have I received.

But, this is true of government at all levels and you make an extremely valid point.

The public can bear the truth if it has the feeling that they are being told the truth and if that information is available to them on a regular basis, as you suggest.

I think you make a significant contribution in that sense.

Mr. DOWNEY. Thank you.

Thank you, Mr. Chairman.

Mr. AMBRO. Thank you. I would like to once more depart from our schedule because we have a spokesman for the Civic Association who has a time problem.

I would like to call up Mr. Thomas Fessenden, accompanied by James Lyman, Mrs. Olson and Mr. Charles Pulaski.

Mr. MOORE. Can I speak?

Can I say something as a citizen?

Mr. AMBRO. Not now. We have a very tight agenda. Maybe later on. We will set aside some time.

Mr. MOORE. But, it concerns the environment. I have a written statement.

Mr. AMBRO. I understand that. If you would like to provide us with a statement, we will include it in the record. Right now, no, you cannot speak.

Mr. MOORE. You said if I would provide you with a statement you would put it in the record?

Mr. AMBRO. Absolutely.

Mr. MOORE. All right.

You heard that.

Thank you.

Mr. WRIGHT. I will guarantee I will read it.

Mr. MOORE. I hope you believe it.

Mr. AMBRO. All right. Mr. Fessenden, you may proceed.

PANEL REPRESENTING WEST ISLIP JOINT CIVIC COUNCIL; TAXPAYERS LEAGUE AGAINST THE SOUTHWEST SEWER DISTRICT; AND OTHER GEOGRAPHICAL GROUPS, CONSISTING OF THOMAS FESSENDEN; JAMES LYNAM; MRS. E. W. OLSON; AND CHARLES PULASKI

Mr. FESSENDEN. Congressmen, members of the staff: My name is Thomas Fessenden. I represent the West Islip Joint Civic Council, which is an amalgamation of active civic organizations in West Islip.

We joined together for civil purposes. One is to undertake joint action in representations of the town and other governmental units on problems affecting the area as a whole. I serve as president.

In addition to this organization, I speak for two other organizations that have been formed over the last several years to oppose the Southwest Sewer District as it was and is now conceived. The organizations include the Committee for Water Preservation, Inc., and the Taxpayers League Against the Southwest Sewer District.

These organizations, in turn, have included civic organizations in addition to West Islip. There is a labor union, the Conservation Committee of Suffolk County, American Legion, conservation groups, Citizens for a Clean Environment, and the Long Island Association.

This morning you have heard many speakers speak of the shortcomings of the sewer district. I am not going to concentrate on that. We have been well aware of the shortcomings for many years. I would like to give a different story this morning. That is, what the citizens have tried to do about it.

I think all too often people in Government do not understand or we are drowned out by the fact that there have been active organizations trying to correct the situation.

Opposition to the southwest sewer district as it was and is presently conceived, is not new. It dates back to prereferendum days when there was a hue and cry from people in Government and outside of Government that the tactics employed by the sewer agency were disgraceful and reprehensible. These events are covered in exhibits 1 and 2 of the letter sent to the New York State Attorney General Louis Lefkowitz, dated May 28, 1973, and made available to your staff member, Robert Prolman.

Exhibit 3 of the same letter further indicates that the State Department of Audit and Control said in 1973 that the sewer ads propagandize rather than inform voters, and was, therefore, not legal under State law as an expenditure of taxpayers' money. On the basis of the propaganda, the referendum was held and did pass by a narrow margin.

I will not go into detail as to why we are against it. We would be glad to answer any questions in that regard.

However, it is my opinion that my testimony today can and should give you an idea what the citizens have been attempting to do.

In July 1972, the Committee for Water Preservation, after several months of evaluating courses of action available to them, decided upon a public confrontation with the county legislature.

Prior to that time, we assessed there were three basic approaches available to us. These were:

First. Educate the taxpayer public as to the facts of what was going on and to enlist the support of the taxpayers en masse;

Second. With appropriate timing, determine the position of candidates running for the county and town governments and actively support those candidates responsive to our position; and

Third. Take legal actions through the court systems against the county legislature and the Department of Environmental Control.

By July 1972, item 1 of the above had been accomplished by developing presentations and attending as many civic and group meetings as possible.

The reaction of the heretofore apathetic and uninformed public was excellent and it was believed that the ability to bring out an enthusiastic and large crowd was at hand.

Exhibit 10, the previously referenced letter gives a news data report of that meeting and I would like to quote just a couple of significant quotes from that article.

At the meeting sponsored by the Committee for Water Preservation, they claimed that they had been deceived. If the costs continue to increase at the present rate, they said they would be paying $1 billion by the time the project is completed in 1978. Environmental commissioner John Flynn assured them that the project would not exceed $500 million. They still did not want it. So, they called for:

First. A moratorium;

Second. Public hearings by the county legislature on why residents were not told what the inflated cost of the system would be;

Third. Another referendum to see if the people who wanted the sewer in 1969 still wanted it; and

Fourth. A study of the feasibility of individual secondary sewer treatment units as alternative to sewers with cost estimates in a county controlled plan.

So, you observe, gentlemen, that we did not wait for the sewer project to spend $200 million before calling for a halt, but rather at a point when approximately $50 million had been committed.

What really took place that night was that a group of citizens presented what they could and any and all questions and suggestions were grounded and submerged by the Department of Environmental Control with staff and the county legislature.

Another meeting was suggested that night by the legislature where only several members of the citizen groups would be in attendance as spokesmen for the people. This meeting did take place and, again,

whatever was brought up was cast aside by the environmental control experts.

One thing that was becoming apparent was that the county legislature was saying that the people had mandated that the sewer be built and until the $291 million had been spent nothing could be done. This was repeated to us over and over again.

The Federal Government started playing a role, knowingly or unknowingly, at about the same time. Whenever costs were questioned, the subject of Federal and State aid would be brought in to cloud the issue. Pictures would appear in the press showing members of the legislature about to take off for Washington to seek Federal aid for the Southwest Sewer District.

Since the legislature had more information than we did, how could we question that they were not going to get more aid to keep the Southwest Sewer District flowing?

This quieted the public because Uncle Sam could always pay the bill, or so the people thought.

All through the period of escalating costs the Government has done very little to actively inform the public as to the cost impact of the project to the individual. The paying public has a right to know.

As recently as this past spring, the town supervisor felt the need to set up an advisory committee to investigate costs for the residents of Islip. I served on that committee and can say firsthand it is difficult to obtain access to enough data to do the job as it should be done through the outside.

We are not just talking about the future sewer tax for the individual, but also the tax increase to the school districts, municipal buildings, fire departments, churches, et cetera, also being taxed by the sewer district. Also, there are the hookup charges, and use charges, that need to be defined.

Just to add one other aspect that Congressman Downey touched upon, the fact is today the sewer tax is not tax deductible in the eyes of the IRS. Very few of the public realize this.

Rather than confuse the issue with State and Federal aid, I would suggest that the county prepare and distribute to every tax-paying citizen in this district a simple-to-understand explanation of aid already in hand and then the costs in graduated steps of expected aid.

Let us keep these two things separated: Expected aid versus aid in hand.

It would be necessary to accommodate varying equalization rates. The index of the table should be assessed value for that is what everyone has on his and her tax bill and not true valuation.

If this is done, and I believe it is something the county owes the public, then I will expect that there will be a substantial change in the attitude of many legislators or there will be different legislators after the next election in 1977.

Our next step was to launch a petition drive with the support of the tax-paying public.

Mr. AMBRO. Mr. Fessenden.

Mr. FESSENDEN. Yes, sir.

Mr. AMBRO. If you could summarize the key points of your statement, I would appreciate it immensely.

Mr. FESSENDEN. I will attempt to do my best.

I thought, Mr. Chairman, just some of these events of what has been going on would be valuable to you. I will try to compress them.

Mr. AMBRO. Just as an example, we do have that clip that you read from. The headline was, incidently, "Who's for a Once Popular Sewer Project or Plan?"

I do not know if it was ever once popular, but we have all read that.

Mr. FESSENDEN. Fine. Exhibit 11 of the previously referenced letter records 3,289 signatures that were obtained and delivered without any further action on the part of the legislature. Although probings and strategy meetings continued, it appeared that we were beating our heads against a stone wall.

In the summer of 1973, we elected the second approach, that of determining the position of candidates running for the county legislature, as well as town positions, and to actively support these candidates responsive to our position. This was done under the banner of the Taxpayers' League Against the Southwest Sewer District.

Three rallies were held prior to the elections and in attendance were both candidates and the public was most gratified. Unfortunately, few candidates took strong anti-sewer positions and the resulting legislature, either through lack of understanding or through indifference, did not change the situation at all.

The third approach, that of the legal approach, was investigated and due to the large cash involved it was discarded.

A public hearing took place on August 21, 1975. This was a public meeting called by the county legislature as required by law before the $291 million authorized by the referendum could be exceeded.

There were two types of citizens appearing at that hearing, those who were interested in the sewer jobs and those who were concerned taxpayers, environmentalists, et cetera, who are looking toward the long-term future of their communities. Each had the same right to be there, but each were not evidently given the same consideration for the county legislature voted unanimously to increase the amount to $640 million, a 100-percent increase.

Two points were brought out at this meeting that were most disturbing to the residents. They were as follows:

Since the minority of the legislators are representing constituents within the district who are paying the sewer taxes, why cannot our legislators vote on such an increase?

Second, is it fair that the county can get initial authorization by referendum and then without coming back to the people they can spend two to three times that amount?

Needless to say, the citizens opposing the sewers for reasons stated earlier were dealt a devastating blow by the unanimous vote, having been led to believe we had a voice. We felt we had been victimized.

Now, although the citizens are angry, they started giving up in despair. One bright light rekindled the flame and started rocking the boat. From our point of view, it was long overdue, but certainly refreshing.

Legislators Lambert and Mrazek have taken the time to study the matter in depth and with their access to information they have uncovered further discrepancies and shortcomings. Unfortunately, County Executive Klein is still able to persuade the majority with his action and this has to be changed.

The most recent example is the blue ribbon committee report which was submitted out of hand because Suffolk County was on the verge of default. Yet, several weeks later, Mr. Klein was asking for $20 million for a farm program, which he received.

Now, for a short summary.

The southwest sewer district has been a positive project since 1969. Its true costs to the taxpayers have never accurately been unveiled. Its needs are questionable. Its functional value is on the negative side of the liabilities with the loss of the shellfish industry, the environmental impact to the lakes, streams and ground waters and further pollution of the sea and beaches, and its financial burden is beyond the means of the tax-paying resident.

The Federal Government could best serve our interests by withdrawing any further funding for the project.

This sounds precipitous. But, we suggest that on the grounds that any project of questionable value should be stopped, no matter what tax base is paying for it.

Thank you. [Applause.]

Mr. AMBRO. Thank you, Mr. Fessenden.

The proposal that you make, as you have heard, is pretty much the same as that of Congressman Downey who preceded you. I guess dedicated minds run the same channels.

I think that, as I said earlier, that proposal is an excellent one. We will present it as best we can to those legislators who are here and John Klein later.

You make some recommendations.

You are accompanied by three outstanding people in the community. I wonder if you speak for them and those are your bottom line recommendations.

Is that a consensus report?

Mr. FESSENDEN. That is a consensus report.

Mr. AMBRO. I would like to ask each of you, for the record, in your own voice, to tell me, Mr. Lynam, Mrs. Olson, and Mr. Pulaski, if indeed you do support the recommendations of Mr. Fessenden.

Mrs. OLSON. Well, first, of course, I do want to thank you, Congressman Ambro, for the opportunity of being here. You did initiate this congressional hearing.

It is very frustrating to the average homeowner and taxpayer to attend these meetings year after year and just be stifled and frustrated.

I do not think anyone mentioned the fact that this outfall pipe is only going out into the ocean 2½ miles.

I attended the Army Corps of Engineers hearing last month and the Department of Environmental Control mentioned that the pipe was only 2½ miles out into the ocean.

Now, I come from a community called the Willetts Point area. It consists of 117 homes, many of which abut the Great South Bay, Willetts Creek, Sagtikos Canal. Most of our homes do. We have about 30 homes just off the water.

We have a prevailing southwest wind in our area.

Now, if this outfall pipe going out into the ocean develops breaks, or due to labor strikes, which can happen very easily, raw sewage will be dumped out through this outfall pipe into the ocean.

As I said, our prevailing southwest winds will bring this back through the Fire Island Inlet into the Great South Bay. Our beaches, our commercial fishing, as well as recreational fishing, recreational boating, everything, will be affected.

I feel that the biggest mistake that will be made will be just this outfall pipe. I definitely feel that if sewage treatment is the answer, that it should be with a recharge system where it can percolate into the ground and where we will not be throwing 30 million gallons of our fresh underground water into the ocean, just throwing it away, as far as I am concerned.

Mr. WRIGHT. Mr. Chairman, at this point, it is obvious that there are among the citizens and among certain groups a degree of consensus, and individual members of those groups have separate and individual thoughts to add. Our time is limited and we are not going to be able to hear personally from everyone who has something to say.

Particularly in line with the young man who seemed rather incredulous with the thought that we would accept his statement and present it in the record and make it available for all of our colleagues to read and study, let me ask unanimous consent at this point that any citizen, either present at this hearing today or not, who wants us to read and be exposed to his or her views, may have that privilege by submitting a statement in writing. I ask that we keep open the record of today's proceedings for 2 weeks for the express purpose of permitting any citizen and any individual who wishes to do so to submit a statement in writing to us for inclusion in the record of these hearings.

Mr. AMBRO. Without objection, so ordered.

Mr. LYNAM. May I just make a few remarks, and they will not be things that we have gone over. They will be very brief.

The question of the sewers, Mr. Ambro, you had asked everybody: What would you do?

I am in the insurance field, not in the sewage business. However, what I would do with the Southwest Sewer District right now is, I would plug it up and leave it in the ground because it was a mistake from the very beginning. It is solving nothing.

To support that, I would like to quote something which took place in the Public Works Committee, House of Representatives, Washington, D.C., in July of 1971. Mr. James Grover, who was our Congressman in the Second Congressional District at the time, brought in Mr. Flynn, who was the commissioner of sewers of Suffolk County. Mr. Flynn made this remarkable quotation. Mr. Grover was presenting Mr. Flynn and questioning him to sort of get information out for the committee.

Mr. Grover said, and this is a direct quote:

> Well, Mr. Flynn, you have painted this picture that under the present law system, a program as you have undertaken, must be voted in by the people. You suggest that if the tax burden of the Southwest Sewer District of the 57 square miles and 250,000 people is so heavy or burdensome that people in the adjoining parts of the county reject subsequent bond issues for additional sewer district, that this effort may well be wasted.

Mr. Flynn answered: "That is correct."

In other words, we have a situation here where he said that if the Southwest Sewer District is the only one sewering the small 15 percent of Suffolk County, then it could well be wasted.

It seems foolhardy to be spending millions, hundreds of millions, and then billions of dollars, if there is any validity to this statement, and there must be because he is supposedly an expert in Suffolk County.

I think that is a very significant statement.

Just a couple of other things I might mention.

You mentioned, Mr. Wright, about what it is going to cost the homeowner. Of course, nobody knows what it is going to cost the homeowner.

I checked Nassau County, I made a personal inquiry. I checked with contractors. I was told it can cost up to $20 a foot to install a line for which the taxpayer will have to pay, to connect to the sewers in the streets. If you were unfortunate enough, and many people do have to go 100 feet to go to that line, it could cost them, conceivably, $2,000 initially, which they would have to finance themselves on top of the cost of the sewers.

Another thing is just to give you an idea of the cost of this project, I figured it out and our national debt of the United States, per capita, is less than the per capita debt of the Southwest Sewer District. We broke it down to the 240,000 people.

Now, if you told that to people, they would say that is unbelieveable, but it is true. I am not allowing for aid from the Government.

The final statement I would like to make is this: The gentelman from the Suffolk Water Authority stated, I believe, there were 5,000 breaks or incidents of damages to county water equipment.

I have watched the sewers go in and I feel very bad. I hope to God the pipes that are in the ground are all fully connected or not broken.

I think we are going to have tremendous difficulty. The workmanship is poor. I think it is evidenced by the remark by the Suffolk County water commissioner.

Thank you very much.

Mr. FESSENDEN. Mr. Chairman, I would like to make one note about something that has come up before and should be straightened out.

There has been quite a bit of talk about 60 cents per hundred true value.

Let me assure you, to the best of my knowledge, there has never been any assurance made to the taxpayers in the Southwest Sewer District that our tax stops at 60 cents.

I believe there was a resolution put into the county legislature some time ago and it was not passed, determining as to what point would this 1 percent sales tax take over. That has never been determined.

So, what I am basically saying is we are still overly liable for the cost of this project and it does not stop at 60 cents per hundred.

Mr. PULASKI. Mr. Chairman, may I say something?

Mr. AMBRO. Mr. Pulaski.

Mr. PULASKI. I am glad I came here today, but I truly believe that this committee and all the people and all the statements that are made here today unfortunately, are coming about $250 million too late.

In 1969, I was quoted in the newspaper as saying that before we get finished it will be a billion dollar boondoggle and I was branded as an ecological nut and I still say this project is ill-conceived. It is placed in a part of Long Island where it will do the least good, which is no good at all, and if it is going to devastate our Great South Bay,

which we have been told, and if it is going to ruin our $100 million shellfishing industry, then all we can look forward to is some day to be indicted by a silent stream or bay and sit there on the banks just watching the filth and garbage sloshing back and forth with the tide.

I think it is high time we say we made a mistake and let us just abandon this project once and for all.

Thank you, Mr. Chairman.

[Applause.]

Mr. AMBRO. Thank you, Mr. Pulaski.

I thank the panel very much.

Mr. WRIGHT. I just want to ask one question of the members of this panel.

You have suggested an abandonment of the project, stopping it.

What would you propose to do then with the sewage?

Mr. PULASKI. The same thing we did with the SST, Congressman.

Mr. WRIGHT. You cannot do that.

This is a serious question.

What would you do with the sewage?

Mr. FESSENDEN. We would continue using the septic systems, the cesspools.

Mr. WRIGHT. You would go back to the septic tanks?

Mr. FESSENDEN. We still have them.

As I noted in one of the exhibits, we had made a suggestion to the county legislature in 1972 that there were units coming onto the market that had been used in other areas and these units treat waste material in a secondary level in your backyard.

If we are going to start talking about alternatives, I can come up with some other alternatives.

Do not get the impression that we represent citizen groups that feel there should be no sewering in Long Island. We will be the first to agree there are some areas next to the water that something should be done about. However, we could do it on a much smaller scale and at much smaller cost to the county of Suffolk and that would be far more advisable.

Mr. WRIGHT. That was my point, really. It was not a point, but a question to you.

If one proposes doing away with or abandoning a plan that has been developed, then one has, I think, responsibility to come forward with an alternate plan that would achieve the results.

That was the reason for my question.

It mystified me just a little bit. I appreciate your answer.

Mr. LYNAM. I would like to mention I have here a statement from the State commission on the water supply needs of southeastern New York. I sent for this. It was written in 1974 after a 4-year study. I am amazed it has never been used.

It compares nine counties, including Suffolk County, Nassau County, and Queens County. Suffolk County is by far in a better position than any county of the nine as regards to water supply.

In here, it says that there is no problem, no critical problem, for Suffolk County until the year 2020, as far as water is concerned. At that point, and with the increase in population, it is conceivable that the use of the water will equal, just equal, at that time, the outgo of the water.

This report is very interesting because it is a bipartisan report.

But, we are going along, for instance, with the report from the sewers committee that we are going to have an imminent disease if we do not put a sewer system in.

Incidentally, Mr. Ambro, I have the original sewer program here which did provide for a recharge program up in your area in 1969. This is the one that was defeated by 6 to 1. It is sewer project No. 1.

It is 1967. I am sorry.

That showed a recharge system.

I have a map here that was put out by the sewer commission.

So, they were fooling the people too because they never had any intention of putting in a recharge system.

Thank you.

Mr. AMBRO. I think it is important to note that that report deals with quantity of available water per capita in each county, but does not specifically focus in on high density areas where the water coming directly from beneath those residences that would use it is polluted and would be polluted and, therefore, something would have to be done.

Beyond that, there is no question Suffolk County right now is in good shape, which is why everyone in surrounding areas would like the water pumped into their areas, thereby later on affecting us.

I would like to make another point, and that point has to be made for the sake of the record.

Even if we immediately abandon the project, those costs incurred by virtue of the sale of bonds would not disappear. You would be paying for them.

I just want to make it abundantly clear.

In any event, I would like to thank you very much for appearing and I would like to once more encourage your written testimony. It will, as a result of Chairman Wright's resolution, be incorporated in the record, as will all statements for the next 2 weeks.

Once more, thank you for coming.

Mr. FESSENDEN. I would like to comment on your last comment, Mr. Ambro.

We obviously represent large citizen groups. We talk to our citizens.

It is on that very basic issue I would say, by and large, the majority of us are willing to pay for the mistake that has already been made. We are not trying to get out of that liability. We recognize it exists But, we feel that is a better alternative than to increase that liability many times over.

Mr. AMBRO. I understand, thank you. The full text of your prepared statement will be made a part of the record at this point.

[Statement referred to follows:]

STATEMENT OF THOMAS E. FESSENDEN, PRESIDENT, WEST ISLIP JOINT CIVIC COUNCIL

My name is Thomas E. Fessenden and I reside at 16 Secatogue Lane East, West Islip, New York. I appear before you today representing the West Islip Joint Civic Council, which is an amalgamation of active civic organizations in West Islip which are joined together for several purposes one of which is to undertake joint action in representations to the town and other governmental units on problems affecting the area as a whole. I serve as President of the West Islip Joint Civic Council.

In addition to this organization, I speak for two other organizations that have been formed over the last several years to oppose the Southwest Sewer District as it was and is now conceived. The organizations include the Committee For Water Preservation, Inc. and the Taxpayers' League Against the Southwest Sewer District. These organizations in turn have included civic organizations in addition to West Islip's, a labor union, the Conservation Committee of the Suffolk County American Legion, conservation groups, Citizens for a Clean Environment, and the L. I. Baymens Association.

Opposition to the Southwest Sewer District as it was and is presently conceived is not new. It dates back to pre-referendum days when there was a human cry from people in government and outside of government that the tactics employed by the Sewer Agency and a private pro-sewer group were "disgraceful and reprehensible." These events are covered in Exhibits 1 and 2 of a letter sent to New York State Attorney General Louis J. Lefkowitz, dated May 28, 1973 and made available to your staff member, Robert Prolman. Exhibit 3 of the same letter further indicates that the State Department of Audit and Control said in 1973 that the Sewer ads propaganized rather than informed voters and was therefore not legal under state law as an expenditure of taxpayers' money. On the basis of this propanganda, the referendum was held and did pass by a narrow margin.

Although I can go into details as to why large groups of citizens are against the Southwest Sewer District as presently conceived, I will only summarize here with the anticipation that many other more qualified experts than myself will give testimony on the technical and financial shortcomings of this project.

1. The lack of recharge in the system is a fundamental deficiency which tends to defeat the reported need for the sewers, that of protecting our water supply. The outfall system not only will deplete 30 million gallons per day but it will lower the water table as well as add pollutants to the sea just 2½ miles off our beaches.

2. With the dropping of the water table, the salinity of the bay will be increased, thereby endangering a $85 million shellfish industry. It is a fact that approximately 75% of the hard clams harvested in this country come from the Great South Bay.

3. In the Southwest Sewer District and to the North the ground water flows vertically down and at the same time it flows laterally to the South. Therefore the water which the Southwest Sewer District attempts to keep pure, is exposed to the cesspools and septic tanks to the north while some of the water under the SWSD is actually flowing out under the bay and sea.

4. The financial mismanagement of the SWSD is in itself a disgrace for the county. A voters' approval of $291 million has now been escalated by the county to $640 million. The total cost (including interest) was originally estimated at $521 million and now that has been estimated by the county to exceed 1.4 billion. Where will it stop? No one can be sure for there has been a long track record of number changing in this arena with only one reasonably consistent pattern, that of larger and larger numbers with the passing of time. The potential financial burden to the taxpayer and the economic impact on home value is more than can be tolerated at this point.

Enough on why the citizens and taxpayers of the Southwest Sewer District are up in arms. It is my opinion that my testimony today can and should give you an idea of what the citizens have attempted to do in the past and how the county government has ignored all of our efforts to bring about change or correction until very recently.

In July 1972 the Committee For Water Preservation, after several months of evaluating courses of action available to them decided upon a public confrontation with the County Legislature. Prior to that time we assessed that there were three basic approaches available to us. These were:

1. Educate the tax paying public as to the facts of what was going on and to enlist the support of the taxpayers enmass.

2. With appropriate timing, determine the position of candidates running for the County and Town government and actively support those candidates responsive to our position.

3. Take legal action through the court systems against the County Legislature and the Department of Environmental Control.

By July 1972 Item 1 of the above had been accomplished by developing presentations, and attending as many civic and group meetings as possible. The reaction of the heretofore apathetic and uninformed public was excellent and it

was believed that the ability to bring out an enthusiastic and large crowd was at hand. Exhibit 10 to the previously referenced letter gives a Newsday report of that meeting and I quote from the article "They were angry. In 1969 they had voted for a sewer system that was to cost them $291,000,000. This year, the estimate is that the project will cost them as much as $800,000,000. And last night they crowded, standing room only, into the assembly hall at the county center here to try to kill the whole thing."

And I skip to the fourth paragraph of the same article to quote "At the meeting sponsored by the Committee for Water Preservation, they claimed they had been deceived. If the costs continue to increase at the present rate, they said, they would be paying $1,000,000,000 by the time the project is completed in 1978. Environment Commissioner John Flynn assured them the project would not exceed $500,000,000. They still didn't want it.

So, they called for:

A moratorium on construction of the sewer system.

Public hearings by the County Legislature on why residents were not told what the inflated cost of the system would be.

Another referendum, to see if the people who wanted the sewers in 1969 still want it.

A study of the feasibility of individual secondary sewer treatment units as alternatives to sewers, with cost estimates, and a county control plan."

So you observe that we did not wait for the Sewer Project to spend $200,000,000 before calling for a halt but rather at a point when approximately $50,000,000 had been committed.

What really took place that night was that the citizens presented what they could and any and all questions and suggestions were drowned and submerged by the Department of Environmental Control with staff and the Legislature. Another meeting was suggested by the Legislature where only several members of the citizens groups would be in attendance as spokesman for the people. This meeting did take place and again whatever was brought up was cast aside by the Environmental Control experts. One thing that was becoming apparent was that the County Legislature was saying that the people had mandated that the sewer be built and that until the $291,000,000 had been spent, nothing could be done. This has been repeated over and over again.

The Federal Government started playing a role, knowingly or unknowingly, at about this time. Whenever costs were questioned, the subject of Federal and State aid would be brought in to cloud the issue. Pictures would appear in the press showing members of the Legislature about to take off to Washington to seek Federal aid for the SWSD. Since the Legislature had more information than we did, how could we question that they were not to get more aid to keep the SWSD on an even keel? Unfortunately this action tended to quiet the public for Uncle Sam could always pay the bill so some people thought.

It is on this financial point that I must severely fault the County Legislature. All through the period of escalating costs, that body of government has done very little to accurately inform the public as to the cost impact of the Project to the individual. The paying public has a right to know but as recently as this Spring Peter Cohalan, Islip Town Supervisor, felt the need to set up an Advisory Committee to investigate costs for the residents of Islip. I served on that committee and can say first hand that it is difficult to gain access to enough data to do the job as it should be done from the outside. We are not just talking of the future sewer tax to the individual but also the tax increase due to school districts, municipal buildings, fire departments, churches, etc. being taxed. Also there are the hook up charges, use charges etc. that need to be defined. Just to add one other aspect is the fact that as of today the sewer tax is not tax deductible in the eyes of IRS.

Rather than confuse the issue with State and Federal aid, I would suggest that the county prepare and distribute to every taxpaying citizen in the SWSD a simple to understand cost publication showing the accurate costs with the aid already in hand and then the costs in graduated steps of expected aid. It would be necessary to break the table into towns so as to accommodate varying equalization rates. The index of the table should be assessed value for that is what everyone has on his or her tax bill and not in terms of true value which is a term not common to the average home owner. If this is done and I believe it is something that the county owes the public, then I will expect that there will be a substantial change in the attitude of many Legislators or there will be different Legislators after the next election in 1977.

Our next step was to launch a petition drive with the support of the taxpaying public. Exhibit 11 of the previously referenced letter records that 3289 signatures were obtained and delivered to the County Clerk by mail dated September 14, 1972. These were hastily obtained to determine if any action would be taken and again it resulted in no measureable action whatsoever.

Although probings and strategy meetings continued, it appeared that we were beating our heads against a stone wall. In the summer of 1973 we elected the second approach, that of determining the position of candidates running for the County Legislature as well as Town positions and to actively support those candidates responsive to our position. This was done under the banner of Taxpayers' League Against The Southwest Sewer District. Three rallies were held prior to the elections and attendance by both candidates and the public was most gratifying. Unfortunately few candidates took strong anti-sewer positions and the resulting Legislature, either through lack of understanding or indifference, did not change the situation at all as will be seen.

The third approach was investigated but not attempted due to large cash requirements.

It is redundant to review all events prior to a public hearing which took place on August 21, 1975. This was a public meeting called by the County Legislature as required by law before the $291,000,000 authorization could be exceeded. There were two types of citizens appearing at that hearing, those who where interested in their sewer jobs and those who were concerned taxpayers, environmentalists, etc., who were looking to the long term future of their communities. Each had the same right to be there but each were not evidently given the same consideration for the County Legislature voted unanimously to increase the amount to $640,000,000 or a 20% increase. Two points brought out at this hearing which are most disturbing to the residents are as follows:

1. Since a minority of the Legislators are representing constituents within the districts who are paying the sewer taxes, why can all legislators vote on such an increase. This is taxation without representation.
2. Is it fair that the County can get initial authorization via a referendum and then without coming back to the people, they can spend three times what the people voted?

Needless to say the citizens opposing the Sewers for the reasons stated earlier were dealt a devastating blow by the unanimous vote. Having been lead to believe that we had a voice once the $291,000,000 was exceeded we felt that we had been vicitimized by the system.

Now, although the citizens were angry, they started giving up in despair. One bright light that certainly rekindled the flame occurred during the Spring of 1976 when the press and a very small contingent of the Legislators started rocking the boat. From our point of view it was long overdue but it certainly was refreshing.

Legislators Lambert and Mrazek have taken the time to personally study the matter in depth and with their access to information, they have uncovered further discrepancies and shortcomings. Unfortunately, County Executive Klein is still able to sway the majority with his panic acts and this has got to be changed. The most recent example of this was the Blue Ribbon Committee's report which was dismissed out of hand because Suffolk County was on the "verge of default." Yet several weeks later Mr. Klein was asking for $20,000,000 for a Farm Program in the Eastern End which he received. There are two inconsistencies here. One is obvious and the second is Mr. Klein's short range vision vs. long range vision. He certainly has short range vision on the Sewer Project while he demonstrates long range vision on his Farm program. A definition of short vs long range vision may be in order. With the objective of walking a straight line the short range visionary starts across a wide field freshly covered with snow and he watches the placement of every footstep with diligence. By the time he crosses the field, if he is successful in crossing it at all, the path is crooked. The long range visionary will watch a fence post on the far side of the field only occasionally glancing to the ground to avoid obstacles. The result is a straight path. It is my hope that Mr. Flynn does not sewer the field and leave open man holes prior to Mr. Klein's short range visionary trip across the field.

Now for a short summary. The SWSD is a closeted project since 1969, its true cost to the taxpayer has never accurately been inveiled, its need is questionable, its functional value is on the negative side with the liabilities of loss of the shellfish industry, the environmental impact to the lakes, streams and ground water, and

further polution of the sea and beaches, and its financial burden is beyond the means of the taxpaying residents. The Federal Government could best serve our interests by withdrawing any further funding for the Project. This sounds precipitous but we suggest it on the grounds that any project of questionable value should be stopped, no matter what tax base is paying for it.

Let me quote from a recent speech by Mr. Klein to demonstrate the panic mode which he seems to pursue. This was from his statement at the public hearing held by the U.S. Corps of Engineers on August 24, 1976.

I quote his opening paragraphs:

"I appear here tonight in support of the prompt issuance of the necessary authorizations for the construction of the outfall for the Southwest Sewer District. There are several very basic points which must be made.

"The Southwest Sewer project is the largest single public works project in the history of Suffolk County. The investment in the project of local, state and federal funds now approximates $200 million. The completion of the project within current cost estimates of $611 million in a timely manner is absolutely vital to the interest of all three levels of government who have financially supported the project and the constituencies which they serve if the investment of those enormous amounts of public funds is to provide the proper return by producing a working, practical and economically viable sewage collection and treatment system. A material delay in the completion of the project or as some have suggested, an indefinite moratorium or abandonment of the project would produce economic and environmental wreckage in Suffolk County for years to come."

May I submit that the very approval of such a project will produce economic and environmental wreckage in Suffolk County for years and years to come. Let's not let ego and face saving blind us with short range vision.

And I quote, again from some speech of Mr. Klein's "In my judgment, this project and the County of Suffolk should be given every possible element of encouragement and support as it is now designed because it is the manifestation of a public awareness of a problem and a determination and commitment to combat that problem within the ability to pay of those who must pay. How much better is this effort than the situation that prevails in the City of New York where every day of the year 400 million gallons of untreated waste is dumped into the bodies of water surrounding the City of New York, much of which then finds its way to Long Island to pollute and destroy commercial fisheries and recreational facilities? The environmental realities demand that we discontinue dumping 30 million gallons of untreated water per day into our natural resources.

The economic realities flatly preclude either abandoning the project and our current investment or proceeding with a vastly more expensive system. The result is we must continue and we must continue in a timely manner. I respectfully urge the issuance of the appropriate approvals by the Corps of Engineers."

And now I comment that short range vision is clouding the situation. Is this project really within the ability to pay of those who must pay? Let's let the citizenry decide that after they are told accurately by the county what they must pay. Let Mr. Klein be aware that ocean and beaches are just as much a part of our natural resources as our ground water. Let Mr. Klein be aware that our shellfish industry can be dilled more quickly by his project than by cesspool pollution. The economic realities do not flatly preclude abandoning the project for common sense tells us not to put more money into a bad and deteriorating scheme. We must not continue in a timely manner per Mr. Klein for his timetable is panicsville. Let's stand back and evaluate this folly. Let's cease needless spending when much cheaper and effective alternatives are available. Mr. Klein should remember that we had the same speech when only $50 million was at stake back in 1972.

Mr. AMBRO. The last people we will invite up prior to a lunch break will be the second part of the panel that we had earlier.

I would like to invite Mr. Barry Andres, who is commissioner of the department of environmental control, town of Islip, and Mr. Robert Ritzert, director of the department of environmental control, town of Babylon, to come forward, along with Dr. Wenig, if he is here. If he would like to sit in and participate, he is welcome.

Gentlemen, we are very happy to have you.

I would appreciate it if you would give your statement in as brief a fashion as possible.

PANEL CONSISTING OF BARRY ANDRES, COMMISSIONER, DEPARTMENT OF ENVIRONMENTAL CONTROL, TOWN OF ISLIP; KENNETH FEUSTEL, TOWN OF BABYLON; AND STEWART BUCKNER, TOWN OF ISLIP

Mr. ANDRES. Hopefully, my remarks will be considerably brief.

I represent the lowest form of government, as has always been stated, a township.

I would like to simply state two areas in which we are impacted by this project.

Ours is an administrative agency. It is not the inspective type thing, but rather it runs physical facilities, one of which is the scavenger waste treatment plant. That has been very popular in the papers lately.

We have a plant that was built in 1968 which was designed to handle really 40,000 gallons per day. We have triple-shifted that facility. We can get it up to 120,000 gallons per day and that is about it.

That facility costs us about $422,000 a year to operate, including the principle and interest payments on the bonded indebtedness.

The point is that we are processing 36 million gallons per year of material which is pumped out of field cesspools. These facilities are failing at an increased rate. In the first quarter of 1976, we had something in the order of half a million gallons more than the first quarter of 1975.

These cesspools are going to continue to be required to have pumping.

Mr. AMBRO. Mr. Andres, maybe you would talk up a bit. We find it difficult hearing everything you say.

Mr. ANDRES. I said these pools continue to fail. They will continue to be pumped.

The only reason that I bring that matter to your attention is we had anticipated closing this facility pending the operation of the Southwest Sewer District. That was part of the arrangement. They would take over at Bergen Point the processing of scavenger wastes.

With the conversations that have gone on before today and with the other conversations in the news media, moratorium cancellation, and that sort of thing, whatever is done must be done with what I would call business-like solidarity in order to give the local township an opportunity to design and build its own scavenger waste treatment facility.

If the southwest district does not proceed, the townships will have to plan on increasing the operation relative to gallonage and upgrading from the very primitive primary, physical kind of things that we are now using up to probably tertiary. These will be expensive. It takes a long leadtime to plan and also to build.

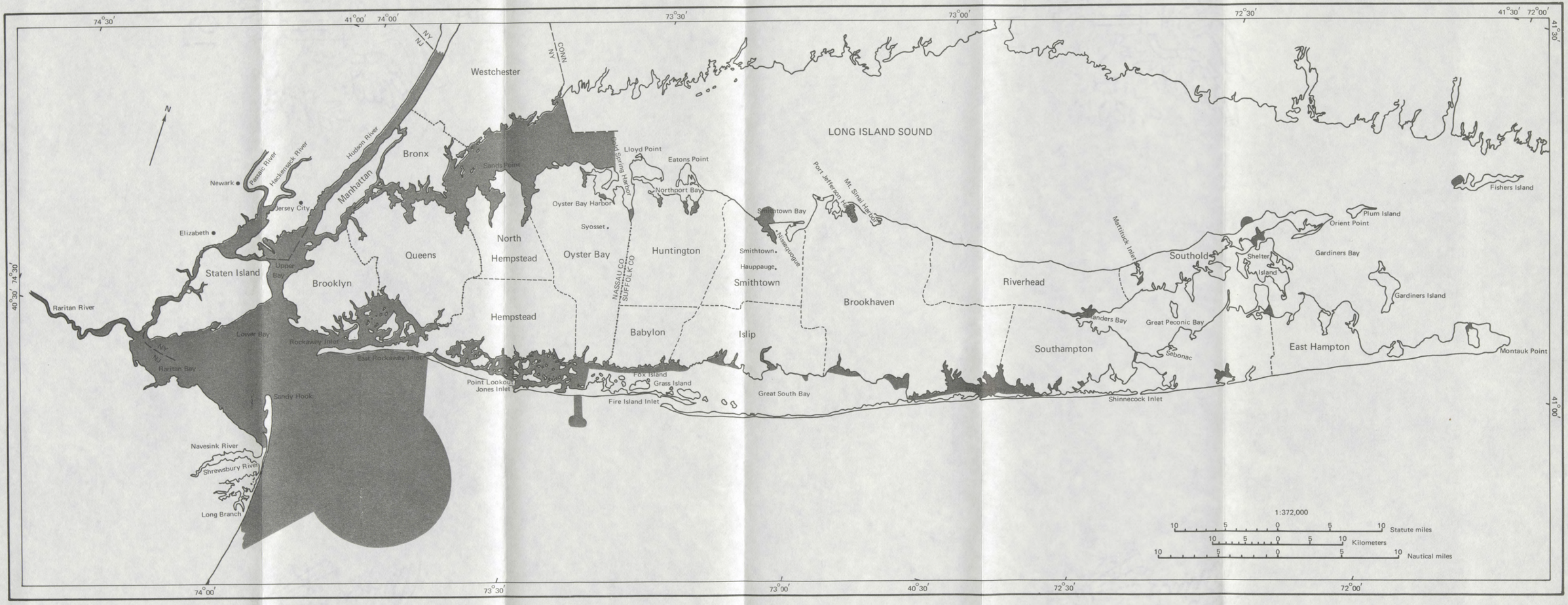
The other areas in which this program impacts on us is related to cesspool failure, and population, and that is the Great South Bay.

I do not know whether you can see this too well from this vantage point, but these are the areas close to shellfishing.

As of April 1, 1975, if you notice, it is progressing from west to east.

The closing is relative to population. It is relative to a number of things. Partially failing cesspools. Partially storm water runoff. Partially a whole mass of various problems.

Areas closed to shellfishing on 1 April 1975



70-172 O - 76 (Face p. 89)

Mr. AMBRO. At this point, I would like you, if you could, to provide us with a copy of that so that the record will have it.

[The map referred to faces this page.]

Mr. ANDRES. I can leave this one.

Mr. AMBRO. That is fine. I appreciate it.

Mr. ANDRES. We, in Islip, started a shellfish management program some 3 years ago. Our budget on it is only $250,000 a year, but it effectively is about the first pragmatic program that has occurred in the Great South Bay on an ongoing basis.

I brought Mr. Buckner with me, who is the Waterways Management Supervisor, in case there are any technical questions relative to it.

I would refer to the commentary that was made earlier relative to the wiping out of the Great South Bay, and the absolute destruction of the shellfish industry, et cetera. I do not believe these impacts are as imminent as were stated, although there is great concern on our part that there is a virtual ignorance of what is truly going on with that industry.

The $100 million number that has been bandied about is effectively a retail value. The personnel involved is some 4,000 that are effectively full-time.

We have been advised by New York State D.E.C. that another 1,200 acres of the bay is about to be closed shortly to shellfishing. This is going to preclude these people from earning a livelihood.

There is some kind of direct relationship between population, the pollution of the streams, each of which is enclosed within the provincial area of Islip. There are some 23 streams and virtually all of them produce an effluent which is above the shellfish standards, thereby impacting on areas.

Mr. AMBRO. The outfall pipe is 5.5 to 6 miles, going beyond the South Bay through the Barrier Beach into the ocean. Projected outflow is 30 million gallons a day.

Do you see any impact on the diminution of salinity in the Great South Bay as a result of that kind of an outflow pipe?

Mr. ANDRES. There have been three or four studies made recently and, depending on which one you believe, you can make your own conclusion.

The one I read recently by Hydro-Science indicated a maximum 3-percent increase in salinity due to the 30 million gallon depression of incoming streamflow.

Now, I also might add that 3 percent occurred in a time frame up to 1995. The optimum growth salinity for shellfishing is in the 26 parts per thousand or 26,000 parts per million range.

Now, the normal fluctuations in the bay at that time expand up to about 27 and down to around 20.

So, no one can factually state at this moment what will occur with the increase of 3 percent.

If the projections of the others are correct, in fact, then there will be a depression of the industry, but no one has defined it.

Mr. AMBRO. Wait a minute now. I do not think I got that.

If there is an increase in salinity in the Great South Bay to the extent indicated by projections, then are you saying that there will be appreciable damage to the shellfish industry?

Mr. ANDRES. If the highest up to 30 and 31 parts per thousand are true, then the normal oceanic predators would come in, those which we do not normally have in the bay. The optimum growth is 26 parts per thousand.

So, again depending upon which study you read, if the Hydro-Science study is correct, then there is only a 3-percent increase in salinity and virtually no effect. If others are correct and it goes into 30 or 31 parts per thousand, then there is a potential problem.

But, unfortunately, again, no real long-term studies have been done in the Great South Bay. We have only started a couple of years ago and we have a very minimal budget to do this work.

So, it is obvious that more defined information must be derived.

That, effectively, was my commentary.

Mr. AMBRO. Well, you and I have worked together before. I know of your capability and your background.

You have a responsibility not only in the area of environment, but you serve in the local administration which has its taxpayers affected by the costs here.

What is your bottom line view of all of this, not only environmentally, but in terms of impact on all of those people you and your administration serve?

Mr. ANDRES. I very honestly cannot speak for my supervisor.

My purview on this project is not one of looking at the economics, but rather of the specific ecological impacts with which we are dealing.

Obviously, there are costs, but there are costs going on now as well.

The operation of this scavenger plant, for instance, is costly. These are failing facilities and the fees for which we are paid does not reflect the total pumping cost. Our fee is $5 per thousand gallons. The carter normally gets about $20 per thousand gallons.

Mr. AMBRO. Those are costs related to some of the services that you provide.

What about the overall environmental impact of the project in your town? Do you have an assessment with respect to that?

Mr. ANDRES. I do not have an overall assessment.

It is my opinion that that area, which is supposed to be sewered, the failing cesspools that are in there now or the ones that are, in fact, leaking at the immediate shore front or immediately in the streambeds, are those which are impacting on our shellfishing and other industries. By sewering those areas, it is hoped that the greatest portion of that pollution would be removed.

For instance, one stream which we surveyed not too long ago, had 80 pipes sticking into it over the length of the stream. We are attempting to define which of those were legitimate storm drains and which were overflows from cesspools. So far, we have only run about 10 percent of them down, but there are other flows.

Getting these kinds of lines off the system, and by system I refer to the stream system, by getting these kinds of things off, it is going to help the bay and there is an economy in the bay.

I cannot comment on the overall economy.

Mr. AMBRO. Is there anything your associates would like to say to augment or supplement what you say?

Mr. FEUSTEL. Mr. Ambro, and Mr. Chairman, my name is Kenneth Feustel. I am staff environmentalist with the town of Babylon, department of environmental control.

Mr. Robert W. Ritzert, our director, as well as supervisor Thomas Dolan and members of the town board, were going to try to make an effort to get here today, but an earlier budgetary hearing has, in all likelihood, run overtime and they are unable to attend. I am certain they would like to be here and make their comments.

Mr. AMBRO. As you have been hearing all day long, we will be happy to accept any written statement they would like to have included in the record.

So if they would like to provide us with a written statement, we would be happy to have it.

Mr. FEUSTEL. Thank you very much.

I would just briefly like to say that the Bergen Point and the whole southwest sewage district project falls within the town of Babylon and our concern within the department of environmental control has essentially been concerning environmental safeguards for the outfall pipe.

As owners of the bay bottom dating to 1600, we have not as yet granted easements to the Suffolk County Department of Environmental Control across the bay bottom and across the wetlands, some of which we own.

If the Army Corps of Engineers and the New York State Department of Environmental Conservation deemed that the proper environmental safeguards have been taken, our town board would grant the easements.

At this point, that is where we stand and I do not wish to comment on what the town board might have to say.

Mr. AMBRO. I do not either want to comment on the kind of authority you might have.

As a former president of the board of trustees, we thought we had great power until we were confronted with easements mandated by the State for pipelines running along the LIE.

I hope that precedent does not intrude in the trusteeship in the town of Babylon.

What about an environmental assessment from the town of Babylon with respect to the sewer project?

It was my opinion, my view, that one of the reasons why I pushed hard to have responsible representatives from the municipalities here is to hear their views with respect to environmental impact over all of this project.

Do you have any thought?

Mr. FEUSTEL. Yes.

Mr. AMBRO. I do not want you to talk for the supervisor of the town board, just talk for the department of environmental control.

Mr. FEUSTEL. Yes. I certainly could do that.

One of our foremost interests, as Commissioner Andres has made known in Islip, is our shellfish industry. We carry out, from year to year, shellfish transplant programs which provide the bay with shellfish that would otherwise be unavailable due to their positioning in uncertified waters.

One of the prime areas that we utilize in our shellfish transplant area is off the mouth of the Carlls River.

So, we certainly feel that any decrease in the flow of the Carlls River might have an impact on those shellfish beds, which is certainly an area of interest to us.

We sell about 1,200 shellfish permits per year at $75 a head. The majority of this money goes back into our shellfish programs.

Also, we have been conducting negotiations with the Suffolk County Department of Environmental Control concerning movement of the shellfish within the path of the pipe.

I do not feel that 100 percent of the shellfish will be removed from the path of the pipe simply because it is impossible. I think people that have dealt with shellfish transplants will certainly bear me out on this.

I would be happy with 30 or 40 percent of the shellfish removed from the path of the outfall pipe.

We are concerned with marsh restoration of Cedar Island where the pipe is passing through.

In addition, we have been in contact with the Suffolk County Department of Environmental Control concerning monitoring of the outfall pipe. The very unfortunate incident that occurred at the Cedar Creek facility in Montauk—we certainly do not want that repeated in Babylon.

In that regard, we want to be very sure, as do our shellfish fishermen in the town, that Suffolk County gives us adequate safeguards to insure that no leaks or cracks escape into the Great South Bay and close down what little remaining area we have in the town of Babylon for shellfishing.

Mr. AMBRO. Thank you very much.

Mr. Chairman, do you have any questions?

Mr. WRIGHT. Well, I think I understand the situation here.

This red dot on the map is in Babylon, the treatment plant?

That is in your town?

Mr. FEUSTEL. That is correct.

Mr. WRIGHT. The proposal, if I understand it, is to extend from there out past the Great South Bay, past Fire Island, out into the ocean, possibly 6 miles from its inception, an outfall line.

As Mrs. Olson, or whoever spoke about it said, it is 2½ miles out. Actually, it is longer than that. It is about 6 miles. Am I right?

Mr. FEUSTEL. 2.5 miles from the Barrier Beach.

Mr. WRIGHT. So, it would be passing the Great South Bay.

All right.

But, your concern is that if there are breaks in the pipe or in the line that would destroy your shellfish.

Mr. FEUSTEL. By that same token, I was at a hearing of the State environmental conservation department for the shortening of the outfall pipe. The EPA felt that data was available that indicated a 2.5-mile outfall pipe would not have an appreciable effect on colliform levels at the beach. Now, we had received assurances from Suffolk County Department of Environmental Control that a breakdown in the plant that might cause partially treated or untreated sewage to be 2.5 miles out into the ocean would not occur. In fact, it was told that barring a catastrophic event, that would not occur.

So, with those assurances, we stand as we do now.

Mr. AMBRO. I think, if I may, Mr. Chairman, I will reinforce the point made earlier by Mr. Andres which was that as the result of this outfall you diminish the water from the Great South Bay and intensify the salinity there to the point where it may go beyond the optimum shellfish cultivation—what is the word?—the ability for shellfish——

Mr. WRIGHT. Propagation.

Mr. AMBRO. Coming from Washington, I do not know those words—thereby adversely affecting what is now or could be a thriving shellfish industry.

There is not only the concern with respect to being directly in the path of the outfall pipe, but it is later——

Mr. WRIGHT. A diminution of the fresh water outfall into the bay that normally you may experience?

Mr. AMBRO. Is that accurate?

Mr. ANDRES. Yes. That is accurate.

The one point that had been made earlier with the stream augmentation, to the degree necessary, this change in salinity could be precluded. It would naturally have to be in more than one place, as I think was also brought out earlier.

Really, what I would like to do is request of you gentlemen to consider the possibility of a little more definitive study work in the Great South Bay, specific to the shellfish industry.

Mr. WRIGHT. Mr. Chairman, we have in the Water Resources Development Act, the so-called River and Harbors Act, a provision which permits recognition for augmentation under benefit-cost ratios of low flow downstream, if we are talking in terms of a flood control navigation project or something of that kind. Never before has it been suggested that that might also be a valuable consideration in connection with development of sewage disposal systems.

In most parts of the country, it would not. But, I see here a situation where it might well be.

In other words, if we were talking in terms of an entirely different type of water resources project, flood control project, and impoundment of dams, something like this, the Government well could take into account the desirability of having water available to augment low flows downstream.

Maybe it is something worth our thinking about as we pursue additional legislation with respect to water pollution.

Mr. ANDRES. It would be good to keep in your considerations.

Mr. AMBRO. If anyone can think about it, Mr. Chairman, and implement it, it is you.

Now, with the permission of the chairman, we will recess for lunch and resume at 2:15, at which time we will entertain testimony from the U.S. General Accounting Office, the New York State Department of Environmental Control, Suffolk county officials, including the county executive, and the U.S. Environmental Protection Agency.

We will recess until 2:15.

[Whereupon, at 1:25 p.m., the hearing recessed for lunch, to reconvene at 2:15 p.m.]

AFTERNOON SESSION

Mr. AMBRO. The subcommittee will come to order.

I announced prior to the break that we will be hearing testimony from the U.S. General Accounting Office, and I would like to call on Mr. Wilbur Campbell, who is the Associate Director, to come up.

Is Mr. Campbell here?

If you would identify those who are with you, for the record.

PANEL CONSISTING OF WILBUR CAMPBELL, ASSOCIATE DIRECTOR, U.S. GENERAL ACCOUNTING OFFICE; JAMES VAN BLARCOM, NEW YORK REGIONAL OFFICE, U.S. GENERAL ACCOUNTING OFFICE; AND OLIVER W. KRUEGER, ASSISTANT DIRECTOR, U.S. GENERAL ACCOUNTING OFFICE

Mr. CAMPBELL. Thank you, Mr. Chairman.

I brought with me today, on my right, Mr. Jim Van Blarcom from our New York regional office, who participated in the study, and on my left, Bill Krueger from my Washington office.

As you know, we did this study at the request of Chairman Wright and Congressman Downey, and since you already have a copy of my prepared statement and since Congressman Downey has already made reference to some of the facts exposed during our study, I simply would like to identify the three areas we looked into and a couple of the facts we found and open it up to any questions you might have.

Mr. AMBRO. Without objection, your statement will be made a part of the record.

[The statement referred to follows:]

STATEMENT OF WILBUR D. CAMPBELL, ASSOCIATE DIRECTOR, COMMUNITY AND ECONOMIC DEVELOPMENT DIVISION, U.S. GENERAL ACCOUNTING OFFICE

Mr. Chairman and members of the subcommittee, we are here today at the request of your subcommittee to discuss the federally assisted project to design and construct a sewer system in the Southwest Sewer District of Suffolk County, New York. With me today are Mr. Oliver W. Krueger, assistant director of our Community and Economic Development division as well as representatives of our Washington and field staffs who are participating in the review.

My testimony will summarize the interim results of our review of various aspects of the Suffolk County sewer project, undertaken at your request and at the request of Congressman Thomas J. Downey. Since our review is not yet completed, the responsible agencies have not been given an opportunity to formally comment on our findings.

Before presenting the results of our work, I would like to make some brief remarks on the construction grants program in general and more specifically on the project here in Suffolk County.

CONSTRUCTION GRANTS PROGRAM

The Federal Water Pollution Control Act amendments of 1956, Public Law 84–660, authorized the first federal grants to assist in the construction of waste treatment works. Then, as now, the selection of projects to be funded was made the responsibility of the States. Public Law 84–660 authorized an appropriation of $50 million a year for these grants, which were limited to 30 percent of the eligible project costs to a maximum of $250,000. Appropriations were increased during the early 1960s and major amendments to Public Law 84–660 occurred in 1966, when the maximum dollar limitation on grants was dropped and the federal share was increased to a maximum of 55 percent.

Enactment of the Federal Water Pollution Control Act amendments of 1972, Public Law 92–500, resulted in extensive changes to the construction grants program. The federal share was increased to 75 percent of eligible costs and the scope of eligible projects was expanded. Public Law 92–500 provided contract authority of $18 billion for these grants.

The construction grants program is administered at the federal level by the Environmental Protection Agency's municipal construction division in Washington, D.C. and by EPA's ten regional offices. The responsible New York State agency is the Department of Environmental Conservation.

SUFFOLK COUNTY PROJECT

This is the first major sewer project to be undertaken in Suffolk County. It is administered by the Southwest Sewer District, an administrative agency of the County. The County commissioner of environmental control serves as administrative head of the district. The project will serve an area of 57 square miles, or about six percent of the county's total area, and about 300,000 persons, or about 23 percent of the county's current estimated population.

The project includes about 900 miles of lateral and interceptor sewers, a sewage treatment plant capable of handling 30 million gallons of wastewater a day, 1 main and 10 smaller pumping stations, and a two and one-half mile ocean outfall. When the project was originally approved the lateral sewers and some interceptors were not afforded Federal aid. Public Law 92–500 subsequently authorized funds for the construction of these components.

Concern over the increasing contamination of the ground-water supply, on which the country relies for drinking water, gave rise to an engineering survey of the county's sewer needs. A referendum proposing a sewer project in the southwest district of the county was defeated in 1967. In November 1969 the residents of the district approved the current project. At that time, the estimated cost of the project was $521 million, including $252 million in interest charges. Current estimates place the total cost of the project at about $1.5 billion, including more than $900 million in interest charges. Based on these estimates, construction costs have more than doubled and interest charges have more than tripled.

The State of New York approved the project for funding in 1970 and Federal grant approval followed in 1971. Initial construction began in August of that year. In March 1972, construction began on an interceptor sewer which was eligible for Federal and State aid and construction was substantially completed in January 1973. As of August 31, 1976, the construction of lateral and interceptor sewers was about 55 percent complete and construction of the sewage treatment plant was about 25 percent complete. Construction of the outfall and the main pumping station had not begun. The county commissioner of environmental control estimated that the project would be completed by 1981.

The county has applied for Federal funds for the project under both Public Law 84–660 and Public Law 92–500, the grant was originally approved in 1971 under Public Law 84–660 and covered eligible project costs of $307.6 million. The Federal commitment under this grant at the present time totals $119.7 million, or 38.9 percent of the eligible costs. The State's share amounts to $92.3 million, or 30 percent of total eligible costs. As of August 31, 1976, about $15 million in Federal funds had been released under this grant.

Suffolk County has also submitted a grant application under the provisions of Public Law 92–500 for lateral sewers and certain interceptor sewers which were ineligible for aid under the old law. This application covers $145.9 million in eligible project costs, of which the Federal share is $109.4 million. The grant application is currently under review by EPA's region II office in New York City. If approved, Federal funds committed to this project would exceed $229 million.

CURRENT INTEREST IN THE PROJECT

As a result of published allegations concerning the administration of the project, a number of organizations have initiated their own examinations. The United States Attorney for the Eastern District of New York and the Suffolk County District Attorney's Office are investigating various criminal allegations.

EPA has created a task force to review the overall management of the project. The State Department of Environmental Conservation has undertaken a review to determine whether the construction of one interceptor sewer was adequate, whether inspection services provided by the consulting engineer were adequate, and whether the inspectors were qualified.

Two committees of the Suffolk County Legislature have examined various technical and financial aspects of this project. The Technical Committee recommended, among other things, a moratorium on awarding construction contracts until the scope of the project was restudied. However this proposal was defeated by the Legislature. The town of Islip, which is in the southwest sewer district, has had a study made to determine the annual cost to the homeowner when the project is completed.

Because of the large number of studies already underway, our review was limited to:

An analysis of increases in construction and related financing costs;

The selection of the primary consulting engineer and the fees paid to the firm; and

Audits of project costs and inspections of project construction.

CONSTRUCTION COST INCREASES

Estimates of total construction costs for the project increased from $269 million in 1969 to $641 million in 1974. The most recent estimate, made earlier this year, revised total costs downward to $612 million.

EPA, State and County officials believed that the primary factor causing the overall cost increase was inflation. State and County officials also said that the original estimates were based on preliminary engineering design, which did not allow the estimates to be as firm as when detailed plans and specifications are available.

Our review disclosed a number of factors which contributed to the significant increase in estimated costs to construct the project but inflation and an extended construction period appear to have been the major ones. The initial cost estimate was stated in terms of 1969 dollars with no allowance for subsequent price increases. During the period from January 1969 to April 1976, the engineering news record construction price index increased by 83 percent and the EPA sewer price index increased by 93 percent. The current cost estimate of $612 million reflects the impact of inflation to date plus anticipated price increases on unbid construction contracts.

Compounding the effects of inflation has been the extended construction schedule. The project was originally estimated to be completed in 5 years but now it appears that construction will extend over a period of more than 10 years.

Another factor was the length of time it took to obtain approvals from the State and EPA before construction began. For example, the County submitted a preliminary engineering design report on the sewage treatment plant to the State in July 1971 but it was not accepted by the State until August 1973. Preliminary plans and specifications for the plant were submitted to the State in early 1973, EPA tentatively approved the plant in January 1974, and bids were received for constructing the plant in July 1974. Construction, however, did not begin until March 1975.

Besides inflation, the cost estimate for the outfall sewer increased because of significant changes in the scope of work. The estimate for the outfall has risen from $12 to $70 million, an increase of 483 percent. The length of the proposed outfall was extended from one and one-half to two and one-half miles. Further, the cost estimate for the fallout was increased when bids received on an outfall by the neighboring country of Nassau significantly exceeded those experienced in the past.

Another factor which contributed to cost increases was the method of paying for consulting engineering services. Reimbursement for these services was based on a percentage of costs, therefore, as total costs increased, the costs of these services also increased.

One comment on the decrease from $641 million to $612 million in the total cost of constructing the project. County officials informed us that various factors accounted for the decrease, including contracts awarded at lower prices than projected, elimination from the estimate of unused contingency allowances applicable to substantially completed contracts, and reduction of the contingency allowance on unbid contracts from 10 to 5 percent.

FINANCING THE COST OF THE PROJECT

The estimated cost to the county in interest charges to finance the local share of project costs has risen from $252 million in 1969 to more than $900 million currently. This increase has resulted from significantly higher costs of construction and engineering services, and from significantly higher interest rates. The county has been publicly criticized for its initial decision to finance the project with short-term notes because, it now appears, interest costs will be higher than if long-term financing was undertaken from the outset. Neither the State nor EPA, however, is required to approve financing arrangements made by municipalities.

In 1969, Merrill Lynch, Pierce, Fenner & Smith, Inc., proposed that the county finance the capital costs of the sewer district through ten long-term bond issues,

the last maturing in the year 2018. In estimating interest costs, the then current maximum rate of 5 percent was used. The county sold $19 million in long-term bonds at an interest rate of 5.25 percent in October 1971 but, thereafter, there was no long-term financing until December 1975.

During 1972, the county sold three issues of one year bond anticipation notes, totaling $180 million, at interest rates from 3.0 to 3.3 percent. The long-term rate in 1972 for a comparable obligation was about 5.5 percent. These short-term notes were renewed in 1973, 1974, and 1975 at interest ranging from 4.2 to 6.8 percent. In April 1976, $54 million in bond anticipation notes, due in September 1976, were sold at an interest rate of 6.75 percent. In July 1976, the county sold $60 million in notes, due in December 1976, at a rate of 9.35 percent. At the present time, there are no short-term obligations maturing after December 15, 1976.

The county attempted to reenter the long-term bond market in November 1975 with a $54 million issue but received no bids. The issue, dated December 1, 1975, and maturing in 1997, was subsequently sold at an interest rate of about 9.8 percent. On August 1, 1976, the county sold an additional $150 million in long-term bonds at an interest rate of about 8.9 percent. It plans to market about $324 million in long-term obligations by August 1, 1977. In the cost estimate, it was assumed that these bonds would be sold at 9 percent interest.

County officials stated that the desicion to go short-term was based on then current market conditions. They pointed out that during the early years of project financing they were able to invest the proceeds of the short-term issues at interest rates higher than they were paying on the notes.

Further, they said they could not foresee the changes in the bond market in 1975 precipated, in part, by the fiscal crisis in New York City and New York State agencies. County officials stated that the current controversy over the southwest sewer district has probably resulted in the county having to pay an interest rate of one percent or more higher on the recent $150 million long-term bond issue.

The county plans to pay for the costs of debt service on its bonds and for operating the sewer system in various ways. The following charges will be levied on homeowners in the sewer district:

A pre-connection charge of 12½ cents for each $100 of full value, annually, for three years.

An annual sewer use charge of $50.

An annual real property tax of 60 cents for each $100 of full value.

The county has also pledged as security for project bonds up to one cent of the existing three cent sales and use tax collected in the county, effective January 1, 1980. If the revenue from these sources is insufficient, all the taxable property in the county is subject to be taxed to pay the bonds and related interest charges.

The uncertainties associated with future construction costs and the condition of the bond market make projecting the annual cost to the homeowner in the district very difficult. In the prospectus for the County's August 1976 bond issue, it was estimated that the annual cost for a house with a full valuation of $30,000 would be $230, including the annual use charge of $50. A local citizen's group, however, believes that the annual cost to the homeowner will greatly exceed this amount.

SELECTION OF CONSULTING ENGINEERS

In April 1970 the county legislature established a committee on consultants for the project. The commissioner and the principal engineer of the Department of Environmental Control made recommendations to the committee based on their evaluation of questionnaires submitted by 59 consulting firms.

Bowe, Walsh & Associates was selected to provide design engineering services for all of the interceptor sewers, the outfall and most of the lateral sewers. The firm was also selected to provide technical inspection of all interceptors, trunk lines and lateral sewers on the project. The same firm had previously performed an engineering study for public sewage disposal facilities in the county and had been the consulting engineer to the Suffolk county sewer agency. In addition to Bowe, Walsh & Associates, 7 other consultants were assigned responsibilities for other project components.

Neither EPA nor the State participated in the selection of the engineering firms on the project. Such involvement was not required by Public Law 84–660.

Under regulations implemented this year, EPA is required to review the procedures by which grantees procure architectural or engineering services, although the new procedures are not applicable to communities of 25,000 or less or on contracts for services which are not expected to exceed $10,000.

The new regulations are designed to have the grantee procure architectural or engineering services on the basis of competence and qualifications and at fair and reasonable prices. The grantee is required to uniformly and objectively evaluate prospective contractors in terms of:

Specialized experience and technical competence;

Past record of performance;

Capacity of the candidate to perform the work within the time limitation; and

The familiarity of the candidate with the types of problems applicable to the project.

Grantees are responsible for negotiating with selected candidates to reach agreement on the provisions of the proposed contract, including price. EPA is required to review the entire procurement process and approve the grantee's compliance with appropriate procedures.

FEES FOR CONSULTING ENGINEER SERVICES

In June 1976, Price Waterhouse & Co. estimated that the total costs of engineering services through project completion would amount to between $72 and $80 million. Consulting engineers provide basic and special services. Basic services include the preparation of preliminary and detailed plans and specifications and estimates of the cost of proposed work. Special services include technical inspection of the work, the preparation of applications and support for Government grants and assistance to the grantee as an expert witness in litigation arising from the project.

Through July 31, 1976, Bowe, Walsh & Associates had been paid about $30 million: approximately $10 million for basic services and $20 million in special services fees. The consulting engineer is reimbursed for basic services, generally at 5.23 percent of construction costs. This rate appeared in The American Society of Civil Engineers' Guide for the Engagement of Engineering Services, issued in 1968, for projects of above average complexity with net construction costs of $100 million or more.

The consulting engineer is reimbursed for most special services based on a multiplier of two times salaries plus benefits, with reimbursement at actual for travel and related expenses. Guidelines for the use of multipliers in arriving at engineer fees were also developed by The American Society of Civil Engineers. These guidelines stated that the multiplier which is applied to salary cost is a factor which compensates the engineer for overhead, plus a reasonable margin for contingencies, interest on invested capital, readiness to serve and profit.

GAO has consistently advocated that cost plus percentage of cost contracts should be avoided because they give contractors positive incentive to inflate contract costs to increase their profits. We reported our views of such contracts to EPA in August 1974 and again in May 1975. Since March 1, 1976, EPA has prohibited engineering contracts which base fees on a percentage of construction costs because such contracts provide no incentive for designing the most economical facility.

EPA now prohibits multiplier contracts where profit is a part of the multiplier. If multiplier contracts are used, the multiplier and the portions of the multiplier allocable to overhead and to profit must be specifically negotiated, and the portions of the multiplier allocable to overhead and profit must be separately identified in the contract.

Further, in all architect-engineer contracts, EPA now requires that a maximum fee be fixed, subject to renegotiation if the scope of work should change.

The New York State Department of Audit and Control and the Suffolk County Department of Audit and Control have also performed limited reviews of the fees paid to the primary consulting engineer. The State reported that, since the consulting engineer was paid on one basis for basic services, on another basis for special services, and on still another basis for work it subcontracted, there was inadequate cost control for engineering services. The State also reported that the reasonableness of profits could not be measured and that the current method of reimbursement for special services limits the ability of the county to control costs during a period of inflation.

A county audit of fees for special services performed in 1972 disclosed deficiencies which raised questions about the propriety of certain charges under the contract. In a followup audit currently underway, the county has determined that it cannot assure the propriety of special services fees billed by the consulting engineer unless it has access to payroll records in addition to those directly related

to the special services billings. The contract provides that the county may audit the records of the engineering firm in relation to special services but limits the audit to that area.

The county believes that access to these other payroll records is necessary to assure that double billing has not occurred, since the firm provides both basic and special services and the former area is reimbursed on the basis of total construction costs. The State Department of Audit and Control also believes that access to the firm's payroll records other than those relative to special services is imperative.

The Engineering firm has denied the county access to the additional payroll records it requested and the matter has been referred to the county attorney.

INSPECTION OF CONSTRUCTION

A number of allegations have been made about the contruction of the first interceptor sewer on the project, interceptor I–9. The allegations involve excessive leaks, improper slope and structural cracks. This interceptor, which was constructed with Federal and State aid, was substantially complete as of January 1, 1973.

The recipient of a Federal water pollution construction grant has the day-to-day responsibility to inspect the construction in-progress and assure that it is adequate. Regulatory procedures under Public Law 84–660 required that the cognizant Federal agency perform an inspection after completion of the project and prior to final payment and stated that interim inspections could be made. Regulatory procedures under Public Law 92–500 state that interim inspections may be made by either the State or EPA. EPA has the responsibility for conducting final inspections.

Suffolk County entered into an agreement with its primary consulting engineer to conduct day-to-day inspections of the lateral and interceptor sewers and to submit weekly inspection reports to the Suffolk County Department of Environmental Control. The County also assigned some of its own personnel to carry out inspections of those same components.

Neither the State nor EPA has been deeply involved in the inspection of Project Construction. Although the first inspection of Project Construction by EPA was not conducted until December 1975, they have been involved in several inspections since then. EPA's Office of Audit has recommended that EPA take action to expand its inspection procedures to require more involvement in all construction projects.

The State believes that the consulting engineer has primary responsibility for inspection. State officials informed us that the seven inspections of the project they have performed to date were not in-depth inspections and the county and the consulting engineer were notified in advance that they would be made. In April 1976, the director of the state division of pure waters advised that more frequent inspections of the Suffolk County sewer project would be initiated.

On September 17, 1973, the consulting engineer advised the county that all of the work on I–9 was completed, tested, reviewed and was satisfactory. A two-year maintenance inspection of the interceptor sewer was conducted in 1975 and although no major visible structural defects were identified, some deficiencies were noted such as house connection leaks, manhole defects, and minor structural defects. This test disclosed that the leaks in the system totaled about 56,000 gallons per day more than allowable. A series of retests was conducted and it was not until the conclusion of the fifth retest that all major portions of the contract were determined to be within allowable limits. All defective work was reportedly corrected by the construction contractor.

In an attempt to resolve the matter, EPA requested the county to dewater I–9 and to visually inspect it to determine the adequacy of construction. The inspection was recently completed and, according to EPA, construction work was satisfactory. The state is also reviewing the adequacy of construction and inspection in addition to the qualifications of the inspectors employed by the consulting engineer. This review is still underway.

AUDITS OF PROJECT COSTS

EPA has not conducted an interim audit of the project to date and none is scheduled at the present time. Audits by the state and the county have been limited to reviews of special services fees paid to the consulting engineer.

Regulatory procedures under both Public Law 84–660 and Public Law 92–500 require a fiscal audit only at completion of the project, prior to making final payment. Interim audits are not required, but may be performed if deemed necessary.

EPA'S OVERSIGHT OF THE CONSTRUCTION GRANT PROGRAM

Mr. Chairman, the magnitude of EPA's construction grant program suggests the need for continuing program monitoring and evaluation. EPA has recently taken steps in this regard which we have not evaluated. For example, EPA entered into agreements with the Corps of Engineers and the General Services Administration to provide assistance in monitoring projects under construction. The purpose of this monitoring is to assure that grantees and resident inspectors properly supervise construction. In addition, EPA increased audit resources for the program by more than 400 percent. The agency has stated that the expanded coverage will enable it to perform pre-award, interim, and final program audits.

Subsequent to suggestions by your subcommittee, Mr. Chairman, concerning the need for reviews of construction projects, EPA announced last month that it had established a financial technical review program, consisting of teams of engineers and auditors to conduct on-site reviews of construction projects. The objective of these reviews, among other things, will be to assure compliance with Federal and State laws, regulations, and policies. According to the agency, about 20 reviews a year will be conducted at projects which vary according to size and geographical location. Upon completion of a review, the team will report its findings and recommendations to the appropriate EPA regional administrator who will be responsible for taking corrective action.

Mr. Chairman, this completes my prepared statement. We will be glad to respond to your questions.

Mr. CAMPBELL. Because of the large number of ongoing studies already under way, we limited our study to three areas.

One was an audit of project costs and inspections of the project construction.

In that area, we found that neither EPA nor the State has been very deeply involved in the inspection process.

As an example, the first eligible project got under way in March of 1972 and was generally completed January 1973. The first inspection was not made by EPA until December 1975.

This particular project, which is known as I–9, disclosed a large number of deficiencies.

At this point in time, EPA has not conducted an interim audit of the project.

Mr. WRIGHT. I am sorry, sir. I do not understand the last sentence.

Mr. CAMPBELL. At this point in time, the EPA has not conducted an audit of the project.

The second area we looked at was the selection of the consulting engineers and the fees paid.

Again, neither EPA nor the State participated in the selection of the firm.

Bowe Walsh and Associates, the primary architect-engineer, has been paid to date approximately $30 million in engineering fees.

The current estimate of $612 million includes a factor of about $57 million for engineering fees at this time. The estimates of the engineering costs could go as high as $70 million or $80 million before the project is completed.

The third area we looked at was an analysis of the increase in construction and related financing costs.

As previously indicated by the other witnesses, construction costs have risen since 1969 from $269 million to $612 million. The financing cost has risen from $252 million, in 1969, to about $900 million.

As Chairman Wright indicated, you have about a 3 to 2 ratio there of financing cost to construction cost.

Basically, this completes a brief summary of our findings and we would be happy to answer any questions you may have.

Mr. AMBRO. Maybe I will just start and then defer to the chairman who is far more expert in this area.

Audits of the project can be conducted on a variety of levels.

The southwest sewer district itself, for example, can conduct a field audit.

Have they done so?

Mr. CAMPBELL. I understand that the county is currently doing an audit or attempting to do an audit.

Mr. AMBRO. Not the county now. I am talking about the sewer district itself.

Mr. CAMPBELL. The sewer district?

Mr. VAN BLARCOM. No.The sewer district itself has not conducted any audits of the project.

Mr. AMBRO. Now, the county, as well as county controller, the county officials, can also conduct an audit.

Have they conducted a field audit?

Mr. CAMPBELL. They are conducting an audit of the special services done by the architect-engineer.

They are having some difficulty, as we understand it, in getting some of the payroll data necessary to determine whether or not all the charges being made under the special services contract are, in fact, valid costs.

Mr. AMBRO. Just with respect to the special services contract; is that correct?

Mr. CAMPBELL. As far as I know, yes, sir.

Mr. AMBRO. Well, we can go into, with the county controller, the kind of audit that they are conducting.

The State of New York DEC can conduct a field audit.

Have they conducted an audit?

Mr. CAMPBELL. They are conducting an audit at the present time. They are looking into the adequacy of the performance and the qualifications of the architect-engineering firm, particularly as it relates to interceptor sewer I–9.

Mr. AMBRO. They are conducting an audit at present.

When did they start?

Mr. VAN BLARCOM. Well, the State Department of Environmental Conservation has not conducted any financial audits of the project.

What Mr. Campbell is referring to is a review the Division of Pure Waters has under way right now, looking into the adequacy of construction and inspection services provided interceptor I–9.

Mr. AMBRO. So, they have not conducted a full financial audit of the project.

Federal EPA, I suppose, can conduct an audit.

I think you testified already that they have not conducted an audit.

Mr. CAMPBELL. That is correct.

Mr. AMBRO. So, at the county, State, and Federal level there has not been a comprehensive audit of this project or a financial audit or a field audit of this project.

Is that an acurate statement?

Mr. CAMPBELL. That is correct.

Mr. AMBRO. I think it might be too much to relate that kind of omission to other projects throughout the country because we might be here for days trying to develop that.

But, what are the consequences of the absence of any auditing on a project of this magnitude?

Mr. CAMPBELL. The consequences could be significant.

We are investing a tremendous amount of funds, as you well know, in capital improvements in this area.

EPA's regulations require that although audits can be performed, they are only required to be performed at the completion of the project.

The same is true with the inspection of projects.

I think EPA is aware of the need for better monitoring of the sewage construction grants program and, in fact, just recently, last month, I guess, the administrator has announced a technical financial review program under which a joint team of auditors and engineers will do onsite inspections of a selected number of projects around the country.

EPA, I think, has taken other actions indicating their concern over this thing in terms of expanding their internal audit coverage.

They recently entered into a memorandum of understanding with the Corps of Engineers and GSA to provide some additional leverage.

Mr. AMBRO. I understood from some comments after the morning session that the amount of material that we developed was great and highly technical as well.

The word "audit" may have different meanings for different people.

Excluding mathematical checks of vouchers received prior to payments, checking to make certain the work is part of the contract and does not exceed the contract price, and checking certain vouchers against signatures, apart from that, is there more to an audit than all of that, or is that a rather simplistic, cursory review of a project, and an audit is far more comprehensive, and, if it is, can you tell us what an audit is?

Mr. CAMPBELL. That is a rather simplistic view of only one type of audit, Mr. Chairman.

We, in GAO, have classified audits into three types; financial type audits, cost-effectiveness type audits and program results type audits. Each of those has a different purpose in mind.

A program results audit would be designed to evaluate the overall success of a program. It could be a major Federal program. It involves how effective it has been in achieving its legislative goals, for example.

Then we have a cost-effectiveness type—efficiency and economy, we call them—which is a lesser scope audit.

I think what you are referring to is a strictly financial contractual audit, a detailed type audit.

Mr. AMBRO. Is that an audit in any sense of the word, adding up a check and seeing if an appropriate signature is on it?

Mr. CAMPBELL. No. That is only one step in an audit.

Mr. AMBRO. One step?

All right.

As I understand from some people who have talked about contracts, I think we were told, or at least I got the view that the contracts are written in many cases strongly in favor of the contractor.

I asked the question, for example, is a contract too permissive when it allows the consultants to subcontract too easily and attach a 10-percent surcharge to the charges passed on to the county?

I think the response was, no, it is rather traditional, or something that is done in convention.

What do you think about that kind of a contract?

Mr. CAMPBELL. That is not an uncommon practice, Mr. Chairman, for prime contractors to add on an overhead and profit factor for subcontractor work.

Mr. AMBRO. Well, you have consistently, according to your report, advocated that cost-plus percentage of cost contracts should be avoided because they give contractors positive incentive to inflate contract costs to increase their profits. You say:

> We reported our views of such contracts to EPA in August 1974 and again in May 1975. Since March 1, 1976, EPA has prohibited engineering contracts which base fees on a percentage of construction costs because such contracts provide no incentive for designing the most economical facility.

How is that statement relevant to these hearings?

Mr. CAMPBELL. EPA contracts with A. & E. firms are basically two types.

You have the basic design contract, which is a percentage of cost type contract. I believe they allow 5.23 percent of the total construction cost as a fee for the contractor for the basic design.

The contractor also has a special services contract for doing the inspection work and other miscellaneous items under which he is paid in the multiplier type contract, two times salary cost incurred, plus fringe benefits, plus actual cost of travel and those type things.

This was discussed earlier.

Mr. AMBRO. Is there any legislative mandate from any level of Government which has oversight responsibilities for this project to assure that an audit, either a performance audit or what was the other phrase you used, cost-effective audit is conducted?

Mr. CAMPBELL. A legislative mandate that an audit be conducted of an EPA program or any Federal program?

Mr. AMBRO. Yes.

Mr. CAMPBELL. The GAO has the responsibility not only with respect to EPA, but every major program. We have the right of access to all data and we have the responsibility to the Congress to provide adequate audit coverage with regard to the expenditure or disbursal of Federal funds.

Mr. AMBRO. But, do you initiate that or do you react to a request from Congress?

Mr. CAMPBELL. We do both types.

We do self-initiated work on what we read to be the congressional interest. We do self-initiative work in a given program area, whether it be construction grants program or the housing program, et cetera. These are done on our own initiative and the reports issued on the blue-backs go to every Member of the Congress.

We do a second type, which is a congressional request.

In other words, we receive a request from a Member or a Chairman to look specifically at some given program or some given aspect of a program and those reports generally go directly to the requestor, unless he agrees to make a broader distribution.

Mr. AMBRO. You mean that both types of those audits that you conduct, one self-initiated and one at the request of Members of Congress, are audits which are comprehensive, which are of the variety that you mention, performance and cost-effective audits, or do you review projects to determine whether or not audits have been done?

Mr. CAMPBELL. We could do all three. It all depends.

Of course, the broader the audit, the more time it takes.

Mr. AMBRO. Let us get back to my other question then.

Is there anywhere among all levels of government an entity having a legislative mandate to conduct either a performance or a cost-effective audit?

Mr. CAMPBELL. EPA is required by its own regulations, I believe, to perform an audit at the completion of the project, prior to final payment.

Mr. AMBRO. At the completion of the project, prior to final payment.

That is the only mandate the EPA has?

Mr. CAMPBELL. So far as I know.

EPA may be able to comment on that when they appear.

Mr. AMBRO. Apart from the investigative review and oversight responsibility of this committee, I think all committees of Congress have a responsibility to determine whether or not legislation is properly drafted to include the kinds of ingredients to ensure adequate audits of all types.

Would you suggest as the result of your review of this project that there is a bit of a gap in the mandate to audit?

Do you think it is a realistic approach to have an audit solely before the final payment for a completed project or is there an on-going responsibility for an audit prior to that?

Mr. CAMPBELL. As I indicated, Mr. Chairman, in view of the vast amounts being expended here, I think it is incumbent we have the best monitoring audit and control we can possibly have throughout the course of each project.

I recognize the problem that EPA is faced with in terms of number of staff as compared to the total number of projects they have under way at any one point in time.

Mr. AMBRO. Yes.

But, beyond that, they do not have any mandate to do it other than the one you just identified, which is prior to payment and at the conclusion of the project, not an interim audit, not a field audit, not a performance audit, not a cost-effective audit.

It may very well be that the legislation which does not mandate these kinds of audits may have within it glaring gaps.

Is that correct?

Mr. CAMPBELL. That is correct.

EPA does develop an annual audit plan in which they show how they plan to allocate their audit resources in the years ahead, and it is allocated between various programs and between various types of audits, financial audits as opposed to effectiveness audits and program results.

Mr. AMBRO. So, without question, when dealing with the funding for these kinds of projects it may very well be that recommendations should be made to assure that these kinds of audits are included on an on-going basis during the construction phase of the project.

Mr. CAMPBELL. If it can be accomplished, it would be one step toward better assurance that the final project is going to meet design specifications, yes, sir.

Mr. AMBRO. We will talk to the EPA about its staff with respect to auditing and the rather ludicrous position they find themselves in with the miniscule resources they have to do this.

But, we are now, in other words, at a point in time in a project where millions upon millions of dollars have been spent without an audit of the project, so that we really do not know where we are or how we got there. Is that correct?

Mr. CAMPBELL. That is correct, sir.

Mr. AMBRO. Mr. Chairman.

Mr. WRIGHT. Yes.

Thank you.

Mr. Campbell. You have been familiar with the water pollution abatement program since its active inception.

Mr. CAMPBELL. Yes, sir.

Mr. WRIGHT. In 1956.

It was greatly expanded in 1965, which made it enormously more sophisticated and more complicated.

As you have explained in response to Chairman Ambro's questions, the GAO monitors both the broad scope of the programs in general and specific projects within those programs when requested to do so by a member.

Now, in all these years, how many situations have you had occasion to look into which had the same problems that this project has had?

Mr. CAMPBELL. To be quite frank, we normally, because of resource problems, do not zero in on a single project.

Mr. WRIGHT. I understand that.

Mr. CAMPBELL. To my knowledge, and I have to qualify that and remind you I have not been personally involved in the environmental programs since the beginning, but, to my knowledge, we have not done a detailed audit of a project of this size and found the problems that we have found.

Mr. WRIGHT. You say you have not in any other instance found the problems that you have found here?

Mr. CAMPBELL. Yes, sir.

But, I would like to qualify that by saying we have not really looked at that many projects either.

Mr. WRIGHT. I understand.

Mr. Campbell, I think I am correct in saying you were associated with the GAO throughout most of this period.

I recall in the days when this subcommittee was investigating irregularities in the highway program, you worked with us in developing information, evidence, and you were helpful to us.

What I am trying to get a feel for is how widespread or how difficult the type of problems that have occurred here would possibly be.

Mr. CAMPBELL. Mr. Chairman, we were just talking about that.

To be quite frank, the problems that we encountered here in terms of the financial burden to the local community to bear their share of this project is a subject that we have not really addressed in the past and it might be a very good one.

I am not sure whether the situation here in Suffolk County is typical or atypical of the problems that the local people are having in financing their share of the sewage construction grants program.

Mr. WRIGHT. Well, I want to believe that it is atypical because if it is typical we are in serious trouble.

I think it is incumbent upon us to try to find out. Maybe we should make some spot checks at some of the larger projects.

Mr. CAMPBELL. I think, in my opinion, it would be a very interesting study to select a number of communities, look at what it is costing them, and the various methods of financing being used to sort of compare it to Suffolk County.

Mr. WRIGHT. Here is what I am getting at.

Back before this became such a sophisticated proposition in 1953, the year before I came to Congress, I was the mayor of a community and we had a bond issue. We dealt with sewage disposal plans. Counting amortization, I figured that it came to the cost of about $120 per household to construct a plant. That was not to maintain and operate it, but the one-time cost of constructing it came to about $120 per household.

Now, admittedly, that was in flat land country of Texas where we did not have any of the extremely fragile ecological problems that are in an area like Long Island. So, there is considerable differnce.

But, what alarms me, Mr. Campbell, is the realization that there are probably some 83,000 households to be served by this system and the system is going to cost $1½ billion, and if I figure right, that comes out to be $18,000 a household to build the system, not to operate and maintain it, just to build it.

Now, we have some serious problems in having to finance this program.

I wonder if perhaps, Mr. Chairman, would it not be a good thing for that kind of cost analysis, cost per household, for the construction of the system, including amortization costs, to be conducted by GAO for the top, you know, those that are in this range? I do not think there are too many higher than this in cost.

Let us get a feel for it and see how typical or atypical this problem is.

If these problems exist elsewhere, we have not heard them. If they are likely to occur elsewhere, I think both the Congress and the administrators in EPA need to be alerted to it so as to do whatever can be done to prevent this kind of thing from occurring.

Now, with respect to the possibility of GAO conducting an aduit, I should like to request from Mr. Kopecky that we draft a letter along that general line and request that that be conducted.

Now, we have been talking here and Chairman Ambro has been asking with respect to responsibilities of the EPA for monitoring these projects.

Do you, representing the GAO, feel that it would require a large and a massive force within the EPA to carry out an inspection program that would catch some of these problems before they blossomed out into a full scale crisis?

Mr. CAMPBELL. Mr. Chairman, I cannot really respond directly to the question because we have not done any type of productivity analysis or work measurement type study of EPA's inspectors.

To put it in a little perspective, for example, here in New York alone I think they have something like 145 projects under way or about to get under way.

Mr. WRIGHT. In the State of New York?

Mr. CAMPBELL. Just within the State.

Mr. WRIGHT. One hundred forty-five projects either under construction or just about to go under construction?

Mr. CAMPBELL. Yes, sir.

As I recall, about 34 of those are under the old law 84-660 and 111, or so, give or take a few, are under the new law.

Mr. WRIGHT. These are water pollution abatement projects?

Mr. CAMPBELL. Yes, sir.

Mr. WRIGHT. For the most part sewage plant construction?

Mr. CAMPBELL. Yes, sir.

In terms of staffing, I believe in the region they have something like 21, 17 engineers and 4 supervisors. This was at last count.

It is difficult to say, to divide people into projects, because the engineers have a lot of other duties besides inspecting and I am sure EPA can tell you what some of their responsibilities are, such as reviewing plans, specifications, and various types of activities.

As to how much of an effort it would be to monitor each and every project a given number of times, it is difficult for us to speculate. I think the administrator is moving toward more inspections as the result of this technical financial approach that I mentioned earlier. Plus, the other actions he has taken to expand the audit function, and to try to bring in the Corps and GSA.

It is too early to tell how effective all those things are going to be in providing better coverage of the construction grants program.

Mr. WRIGHT. Well, it is not as though there has not been an enormous amount of paperwork that had gone on prior to the approval of this project.

According to your report, which we have before us, the county submitted a preliminary engineering design report on this project in July of 1971. Then it went through, presumably, considerable review by the State and preliminary plans and specifications were submitted finally in early 1973. EPA tentatively approved the plan in January 1974. The bids were received for constructing the plant in July 1974. Construction did not begin, however, until March of 1975.

There was an enormous amount of time that had lapsed there and your agency has engaged with our committee in a sometimes frustrating review to see how you compress this time frame and cut out the red tape that boggles these programs down and causes delay which also consumes time and money.

Now, with the personnel that EPA has looking at these papers, reviewing the papers, studying and analyzing and looking over environmental impact statements, and all this kind of thing, I just wonder about the 17 engineers and 4 supervisors in the State of New York.

I am not presuming the elementary wisdom to suggest how the Agency should arrange its workload, but it strikes me that it might

alert itself to problems in advance if it had more people who were out in the field going to the communities and looking at the problems, seeing them on the ground, instead of quite so much paperwork.

Now, is that a valid observation?

Mr. CAMPBELL. If you are asking for my personal opinion, being an auditor, I feel there is no substitute to being on the site and actually working with the people on the projects.

It is conceivable that EPA could develop some type of criteria whereby they, on a selective basis, could identify or flag those projects which they know are going to be troublesome projects or indicative of some type of problem. It could be in terms of size. It could be in terms of environmental consideration.

It is not to say that they would have to look at every project to the same depth, but conceivably they could develop some plan for flagging a number of projects and types of projects that should be reviewed and visited periodically.

Mr. WRIGHT. I think you understand what I am getting at.

I do not want to be unfair to EPA and probably I have been in my criticisms of the redtape, and so on.

On one hand, I do not want to accuse the EPA of having been derelict in not looking closely enough at details, while at the same time I am criticizing them for engaging in too much redtape. That would be a little bit unfair of me. Therefore, what I am looking for and what I believe most of the members of our committee and the Congress, probably, are looking for is some way to improve their capacity to catch problems of this kind at a much earlier stage than when all of this money has been spent without just compounding the redtape, which already exists in proliferous abundance.

I do not have a quick answer to this.

Mr. CAMPBELL. There is one suggestion.

EPA has delegated the responsibility for the inspection of the project to the local community who in turn, for the most part, because of lack of capability, have contracted with the A. & E. to provide those types of services.

As a substitute for EPA, actually, during the inspection, it is conceivable that they could develop a program for monitoring to insure that the State, local community and the A. & E. is effectively or more effectively carrying our their respective roles.

Mr. WRIGHT. Well, we have incorporated in the bill presently pending before the Congress, H.R. 9560, a provision to look to States to certify that Federal-mandated requirements have been met.

In this bill, we allow an amount of up to 2 percent of the amount authorized for construction grants, according to that State, to be reserved for this purpose and it is to be granted by the administrator in carrying out his authority.

In our committee report, we declare States exercising certification authority may assign personnel funding under this provision to onsite inspection.

I wonder if that might not be of some assistance.

Mr. CAMPBELL. I have not seen that, Mr. Chairman, but based on our experience to date, I think it would certainly be a big help.

Mr. WRIGHT. I thank you.

I have a great many more questions, Mr. Chairman, but I think the witnesses have been extremely helpful to us and I should not want to burden the time of other witnesses by indulging in my own curiosity beyond the point that I already have.

Mr. AMBRO. Well, I thank you, Mr. Chairman.

The report from Mr. Campbell of the U.S. GAO is indeed one of the frankest and, in my view, most startling reports I have ever read, because most reports from Government agencies are rather circumlocutory and this goes right to the heart of things.

I know there is a time constraint, but I just have to ask you a couple of questions more about this report.

You say, for example, that the estimated cost to the county in interest charges has risen from $252 million to more than $900 million and this increase has resulted from significantly higher costs of construction and engineering services, and from significantly higher interest rates.

You also say the county sold $19 million in long term bonds at an interest rate of 5.25 percent in October 1971, but thereafter, there was no long-term financing until December 1975.

What is the implication of that statement?

Mr. CAMPBELL. In the beginning, as was testified earlier, they went with bond anticipation notes, short-term, 1-year, notes, at about 3-percent interest when bonds were going about 5.5 percent.

As indicated, at that time, it looked like a good deal. They were speculating, in effect, on the bond market.

Ultimately, when the interest rates began to skyrocket, they tried to get back in the bond market and they were unable to sell their issue. It was reissued at a later date at a rate of 9 percent or something.

There has been a great deal of testimony this morning that the more conservative approach normally for capital financing is the long-term bond route. Had they gone that route in the beginning, early in the game, although we have not worked out any type of potential savings, the financing costs would have been less.

Mr. AMBRO. At considerably less interest rate.

Mr. CAMPBELL. Yes.

Mr. AMBRO. You say with respect to the selection of consulting engineers that the Commissioner and the principal engineer of the Department of Environmental Control made recommendations to the committee based on their evaluation of questionnaires submitted by 59 consulting firms.

Then you say neither EPA nor the State participated in the selection of the engineering firms on the projects. Such involvement was not required by Public Law 84–660, under which the project originally came.

Is that correct?

Mr. CAMPBELL. That is correct, sir.

Mr. AMBRO. This resulted in the selection of Bowe, Walsh & Associates to provide design engineering services for all of the interceptor sewers, the outfall and most of the lateral sewers.

Through July 31, 1976, Bowe, Walsh & Associates had been paid about $30 million. That figure has been qouted often. It was $10 million for basic services and $20 million in special services fees.

Then you go on to say they are reimbursed at 5.23 percent, which is the American Society of Civil Engineers guide figure for these sorts of things.

Legislator Mrazek testified that the multiplying of two times salaries plus benefits was one that was used here. In other counties stronger negotiating practices are used, because of a different point of view.

He was critical of that.

Then you go on to say that you have consistently advocated—and I read this before—that cost plus percentage of cost contracts should be avoided and now EPA prohibits that.

There is a point I want to make.

Is the prohibition by EPA the result of viewing this project with respect to the way contracts were developed here, or did they come upon this prohibition as the result of something else?

Mr. CAMPBELL. To my knowledge, it had nothing to do with the project here.

We have been working with EPA for several years to get away from this type of contracting.

As we indicated, we issued two reports making this recommendation; and we would like to think that as a result of our urging and their own recognition and the fact that this was not an equitable way of contracting, that that brought about this change in EPA.

Mr. AMBRO. The New York State Department of Audit and Control reported that there were inadequate cost controls for engineering services, as you note on page 15 of your statement.

On the next page, you indicate that a county audit of fees for special services performed in 1972 disclosed deficiencies which raised questions about the propriety of certain charges under the contract.

In a followup audit currently underway, the county has determined that it cannot assure the propriety of special services fees billed by the consulting engineer unless it has access to payroll records, in addition to those directly related to the special services billings.

The contract provides that the county may audit the records of the engineering firm in relation to special services, but limits the audit to that area.

Then you tell us that the engineering firm has denied the county access to the additional payroll records it requested.

On what basis did they deny access? Are we touching on an area that is under criminal investigation?

Mr. CAMPBELL. I think we can comment on that.

Would you like to address that?

Mr. VAN BLARCOM. The contract that the county has with the engineering firm to provide special services is conditioned to the effect that it gives the county the right to review payroll records of individuals who work for that consulting engineer and provide special services on the southwest sewer district project.

Now, the engineering firm is reimbursed for some of the services provided based on actual salaries times two, but in other cases, it is reimbursed for design services based on just total construction costs. The county auditors have decided, the clause of the contract notwithstanding, that they cannot assure that the county is being accurately billed for special services and not being double billed for the same work under the construction cost percentage agreement unless

they have access to more payroll records than they are granted access to right now.

The consulting engineering firm has turned down their request and the county comptroller has referred the matter to the county attorney for resolution.

Mr. AMBRO. Well, so we do not have at this point in time proper audits, and those audits that might be initiated are frustrated by less than cooperative consulting engineers; is that correct?

Mr. CAMPBELL. That seems correct.

Mr. AMBRO. Once more I would like to thank you for your statement, your review of the project and the reports.

Just one last question: Where do you go now?

What are you going to do with respect to all this?

Mr. CAMPBELL. We are going to have to sit down with the subcommittee staff and Congressman Downey, since we did this study at their request, and see whether we just terminate this particular study here or expand it into a broader issue area, as we have discussed briefly here.

I guess I am saying to you it is kind of up in the air at the moment, Mr. Chairman.

Mr. AMBRO. Thank you, Mr. Campbell, from all of us.

I would like to thank you for your frankness and for the good work you have done.

Mr. WRIGHT. Mr. Chairman, just before they leave, I have one question.

I do apologize for extending the conversation because there are other witnesses.

When it comes right down to it, the major part of the reason for the escalation of the cost so widely beyond the initial expectation is the outrageous cost of money, borrowed money; is that correct?

Mr. CAMPBELL. That is correct.

Mr. WRIGHT. In other words, you report that during the period of time when the estimated cost of the actual construction, because of changes and expansions and modifications and inflation, the cost was going up about 200 percent? The cost of borrowing money was going up about 300 percent.

In 1972, they were borrowing money at rates from 3 to 3.3 percent. In July of this year, they were having to pay 9.35 percent.

To put it another way, I figure that the cost of this total project to the average household in Suffolk County is going to be $18,000. Of that, almost two-thirds, pretty close to $12,000, is going to be interest.

Is that about right?

Mr. CAMPBELL. Right.

Mr. WRIGHT. Then that addresses the very broad problem which Suffolk County cannot control, and I am not sure that Congress can control it because people who establish interest rates are neither elected by the public nor ratified by Congress, but they are people who have operated upon the assumption that high interest holds down inflation.

Now, it seems to me that is the most shocking theory of a bygone age that still is being followed by policymakers in Washington.

It seems to me it certainly ups the cost of everything that is constructed.

I do not know that I need to ask you to respond to that; but Arthur Burns and I just have a profound disagreement about this subject.

Mr. AMBRO. Mr. Chairman, if you will yield a minute, I subscribe to everything you say in general, conceptually, and all of your conclusions.

I think the point, however, that I was trying to make, Mr. Campbell, is one contained in your report, which says clearly and in understandable language,

> The county has been publicly criticized for its initial decision to finance the project with short-term notes because, it now appears, interest costs will be higher than if long-term financing was undertaken from the outset.

You said, I think, that they financed originally the BAN's and there was a hiatus between the original $19 million long-term bonds in October of 1971, of over 4 years before long-term financing was entered into again.

Now, does one read into that the thought that with prudent, conservative fiscal management that one could have taken advantage of the better interest rates at the time and let it go for a 4-year term to get in at a time when interest rates were inordinately high?

Mr. CAMPBELL. I am not sure I understand the point.

Would you repeat that again, please?

Mr. AMBRO. Well, you said there was a hiatus of over 4 years.

Mr. CAMPBELL. Before they came back with long-term debt.

Mr. AMBRO. That is right.

Mr. CAMPBELL. Yes, sir.

Mr. AMBRO. Are you suggesting that a different kind of fiscal management could have avoided, by selling long-term notes earlier, that kind of spiralling interest rate which results in these huge costs today?

Mr. CAMPBELL. Yes.

What we are saying is in 1971, when they went out for the first $19 million at 5.25 percent interest rate, the following year they sold BAN's, totalling about $180 million a year at interest rates, from 3.0 to 3.3.

The following year, again, in 1973, they went out and renewed those short-term notes at a rate of 4.9, 5.6, and 5.0. Then when they finally did come back in the bond market in 1975, they had to pay 9.8.

So we are saying—and the county admits—had they foreseen what was to happen to the interest rates, they conceivably could have bought those bonds in 1971, somewhere in the 5-percent range.

Mr. AMBRO. And without leaving it dangling, and in an attempt to avoid being unfair, is there any financial manager that could have foreseen that, or are we just in hindsight making the point, which is more academic than real?

Mr. CAMPBELL. Yes.

Had the interest rate situation not occurred like it did, they would have looked like heroes. You are correct.

The only thing I can say is, I think it is generally the more conservative approach in financing capital improvements to use the long-term debt. But that does not mean that that is the only way to go.

Mr. AMBRO. I was selling bonds at the time; and in October 1971, they were 5.25, if I recall correctly. Correct me if I am wrong. It was kind of high. One would have hoped that that interest rate would

have declined if one waited a while; and so you get on this treadmill of waiting for it to go down and it keeps going up and someone in a bank says, hang around and it will go down a little further and rather you wake up one morning and it is up higher.

I do not want to get the county off the hook or put them on, either way. I am just trying to lay it out as clearly as I can.

I have had experience in this area. I know how you get involved in these kinds of problems.

Mr. CAMPBELL. There is no question about it. That is why we make no criticism. It was a decision that was made. At the time, it looked good.

Mr. AMBRO. I would like to thank you again and merely rest on the profound observation that we all agree that it is the bottom line that burns the hole.

Mr. AMBRO. The next scheduled witnesses are from the New York State Department of Environmental Conservation, Eugene Seebald, who is Director of the Division of Pure Waters; Ernest Trad, Associate Director, Division of Pure Waters; William LaRow, Assistant Director, Bureau of Sewage Programs; Robert G. Hampston, Supervisor; Craig Porter, Assistant Sanitary Engineer; and Ali Khan, Senior Sanitary Engineer.

Gentlemen, I would like to welcome you and thank you for attending, and ask Mr. Seebald, if he will, to open it up.

You have been sitting here a while. We are under time constraints.

PANEL CONSISTING OF EUGENE SEEBALD, DIRECTOR, DIVISION OF PURE WATERS, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION; ERNEST TRAD, ASSOCIATE DIRECTOR, DIVISION OF PURE WATERS, NYSDEC; WILLIAM LaROW, ASSISTANT DIRECTOR, BUREAU OF SEWAGE PROGRAMS, NYSDEC; ROBERT G. HAMPSTON, SUPERVISOR, NYSDEC; CRAIG PORTER, ASSISTANT SANITARY ENGINEER, NYSDEC; AND ALI KHAN, SENIOR SANITARY ENGINEER, NYSDEC

Mr. SEEBALD. Thank you.

Mr. Ambro, Chairman Wright, I appreciate the opportunity for me and my staff to appear before you today.

As you indicated in your invitation, you wanted us to be able to help you find out what is behind some of the allegations or charges, what has led to the situations, and where are we today in the case of the Suffolk County Southwest Sewer District.

I would like to state at the outset that the project was developed as a result of the Pure Water Program, initially begun in 1964. It stemmed from a need, very definite need, for sewers and sewage treatment in an area where there were certified public health hazards attested to by local health officials and subscribed to by the commissioner of health at the time.

So this is not a project that arrived out of the blue. It stemmed from a very definite needs survey and they properly developed the project.

I would like to indicate also—and you may be well aware—that we have cooperated with your investigators since the onset of the preparation for this particular hearing.

In the meantime, we have also cooperated with EPA and the GAO in putting together their material.

We have no formal presentation to make at this time. However, I have read the presentation prepared by EPA region II, which will be submitted as testimony, and it represents the joint efforts of both EPA and NYSDEC in addressing the various developmental steps and the existing status of Suffolk County Southwest Sewer District.

I would wish that you would regard the report tendered by Mr. Hansler, of Region II, the regional administrator, as representative of the views of the New York State Department of Environmental Conservation.

Myself, together with the staff here assembled, have been familiar with most of the facets that were developed by the previous speakers in a greater or lesser detail.

The reason for the number of people here is so that we will be able to address more fully or most fully any of the details you may wish to touch on with respect to all of the problems that were addressed earlier by previous witnesses, including the lastest dewatering and testing of the first interceptor, I–9, with which we are familiar and in which we participated with EPA.

I would like to point out also that with respect to the preceding testimony by GAO, NYSDEC is not a financial auditor.

However, we do request and have requested at times interim audits of projects. Usually the larger projects are the subjects for interim audits and not only a single final audit.

In this case, it is to be kept in mind that the total Suffolk County project is only 15 percent completed in the overall picture. So it cannot be regarded as really that far along that it would prompt an out-of-hand interim audit at this stage of the game.

I would like to answer any questions you may have at this point.

Mr. WRIGHT. The committee staff advises us that all of you have been extremely cooperative and helpful. For that we want to express our appreciation.

Mr. SEEBALD. Thank you.

Mr. AMBRO. Just a couple of things, Mr. Seebald.

The arm of the New York State government which would conduct audits would be the New York State Department of Audit and Control, and I suppose their bureau of municipal affairs.

While the project might be 15 percent complete and, therefore, not one which would trigger an audit from you, given the high visibility of the criticism of the project and the large amount of dollars that have already been committed to it, do you think now you would be interested in having a State audit of this at this point in time?

Mr. SEEBALD. I feel that it is essential that we await the outcome of the miscellaneous investigations that are ongoing and the development of some figures, some of which I believe have been presented here today, which have to some extent deescalated some of the figures that appeared previously in the press.

I would like to reserve judgment as to whether or not we would be requesting an audit at this point in time.

In other words, the validity of the charges have in some cases not held up under the scrutiny of your honorable body this afternoon.

Mr. AMBRO. Except if you are going to wait for the results of prosecutorial investigations, that is one facet of this thing; but to await as well the validity of charges of escalating costs is something that merely means to me that you could request an audit to determine the validity of those charges yourself.

Mr. SEEBALD. I would have to consult with staff to see if actually that is in order.

Mr. AMBRO. Now, apart from accepting the views of the Federal EPA in its statement, which I do not have before me, do you not have your own view on the environmental effects of impact of this project as opposed, let us say, to the criticisms you heard this morning?

Do you have any comment with respect to all of that?

Mr. SEEBALD. We have views on just about every one of the issues that were raised this morning. There is a great deal of validity to a number of them. The degree to which they should be addressed and in what sequence, I think, is open to question.

I believe it should be pointed out that we have considered in all cases the environmental damage that may or may not result. We have considered the potential of ground water recharge, the need for flow augmentation, perhaps in surface water; the effect on the shellfish beds of saltwater intrusion or the lack of the inflow of additional freshwaters.

We have also considered the shortening of the outfall as an attendant impact on any shoreward installations.

We have in all cases made conscious decisions in all of these regards and are continuing to include in our considerations recharge in the case of all Long Island waste treatment plants.

However, we feel that we must await the outcome of the large-scale recharge installation currently being developed at the Wantagh plant site in Nassau County, which will indicate the feasibility of recharging large quantities of waste water, treated to a sufficient degree to allow its recharge into the ground water aquifer.

Mr. AMBRO. When will the Wantagh recharge plant be completed?

Mr. SEEBALD. It will be completed in 2 years; but then it will take about a 3-year study period after that to determine the efficacy of it.

Mr. AMBRO. So that will be 5 years from now?

Mr. SEEBALD. That is right.

Mr. AMBRO. What is the capacity involved?

Mr. SEEBALD. Five million gallons.

Mr. AMBRO. Five million a day?

Mr. SEEBALD. Yes.

Mr. AMBRO. Do you think that is a sufficiently good pilot to make a determination for this project with respect to its efficacy?

Mr. SEEBALD. We do.

Mr. AMBRO. Do you think as well that a retrofit cost, given the ability to install a tertiary system here, would be within the means of the District, or can you not judge that at the moment?

Mr. SEEBALD. I do not believe I can judge that at the moment.

Mr. AMBRO. Do you not think that 5 years is a long time from now to look into this kind of thing?

Mr. SEEBALD. Unfortunately, to do anything sooner would be risky.

Mr. AMBRO. It would be what?

Mr. SEEBALD. Risky.

Mr. AMBRO. Why?

Mr. SEEBALD. I just do not believe the technology in the quantities we are talking about exists.

Mr. AMBRO. Mr. Chairman, do you have any questions?

Mr. WRIGHT. Well, this is an interesting view.

I think, according to our records, on June 29 of this year, a grant was awarded for the construction of this recharge plant.

Now, after it is completed and built, as I understand it, you then intend to take about 5 years to study it.

Am I right or wrong?

Mr. SEEBALD. About 3 years.

Mr. WRIGHT. So, it is a total of 5 years until you feel you will have a sufficient base on which to decide whether or not that is a feasible approach?

Mr. SEEBALD. That is correct.

Mr. WRIGHT. What about the other suggestion that was made here today of augmenting stream flow for the treatment of the sewage?

Mr. SEEBALD. Very candidly, it has been a matter for discussion between myself and members of EPA staff Region 2 within the last month.

There is no final conclusion, I might add.

But, it is actively being pursued.

We perceive a need and we would like to move forward as quickly as we can reconcile the facts.

Mr. WRIGHT. One other question, that is all.

As I understand it, EPA and New York State have been making certain inspections on one of the interceptors.

Mr. SEEBALD. Yes, sir.

Mr. WRIGHT. I–9.

There has been a great deal of publicity about that.

Problems were noticed there during construction and a couple of years ago they required a test to disclose failures.

What about your most recent tests?

What do they show?

I understand they were just completed.

Mr. SEEBALD. I prefer that the individual making the inspection comment.

Mr. Hampston of my staff made the inspection.

Mr. HAMPSTON. We have just received the final data on the tests and we are still analyzing it.

However, based on what we saw out there, and the data that we have received thus far, we feel that, preliminarily anyway, that the sewer as installed is a satisfactory installation.

The leakage limits are overall within the specified limits.

Mr. WRIGHT. You are saying so far as you can tell now from the examination of data available to you, you think they have corrected those deficiencies which earlier caused so much concern?

Mr. HAMPSTON. That is correct.

Mr. WRIGHT. Thank you.

Mr. AMBRO. I just want to tie up this end and then conclude.

The Tahoe plant, for example, is a tertiary plant that has been around for a number of years and is probably the forerunner of others, but the gallonage is so small that I suppose it cannot be used as a

project which can be effectively translated to either Wantaugh or this one.

What assurance do we have, given the gallonage of Wantaugh, that it is a sufficiently good example of the efficacy of tertiary treatment to be brought to this project?

Mr. SEEBALD. Two things.

One is that the wastes would be similar.

The treatment process train that is being used at Wantaugh is conventional. It is not using any novel methods.

It is actually putting in place conventional pieces of process equipment, et cetera.

One of the points that is actually being developed is the best method of getting the highly treated effluent back into the ground.

The methodology for recharge, open basins, shallow wells, any other methods of diffusion—some of the problems that are attendant in the recharge program is the methodology of recharging itself, not the treatment prior to recharge.

Mr. AMBRO. You are absolutely satisfied then, that given the 2-year construction time, if it is constructed in that time, and a 3-year study time, that this project can proceed on the present design with the outfall and secondary treatment without harming all of those fragile systems that were discussed earlier, without causing salt water intrusion, increased salinity in the bay, diminution of the aquifers, intensification of pollution, and all of those other horrors that were dealt with in the morning session?

Mr. SEEBALD. I believe that I can safely say yes to that.

Mr. AMBRO. I see. I appreciate your testimony. I appreciate your coming. I appreciate your frankness. I thank you.

Our next segment includes Suffolk County officials: John Klein, Suffolk County Executive; John Flynn, Commissioner of the Department of Environmental Control; Arthur Imholz, Deputy Commissioner of the Department of Environmental Control; William Graner, Chief Engineer for the Department of Environmental Control; Carl Shapiro, Principal Accountant, Department of Environmental Control; and John Guldie, Resident Engineer.

Will those of you who are here come forward. We will wait for the county executive.

I see our illustrious executive has arrived.

Mr. KLEIN. No. No. Mr. Caso is in Nassau, but I am here.

Mr. AMBRO. I will leave that on the record without comment.

It is a pleasure to welcome you and your colleagues, Mr. Klein.

I do not know how long you have been sitting here listening to this, but we have had a good deal of testimony preceding yours.

We would like, without question, to get the views of all levels of government involved in this project, including Federal, which will follow you.

I would like to depart from the format and the discussion topics because knowing you, I know you have a great deal of background in government for many, many years.

We have served together on a number of elected boards.

I would like to just open it up to you for opening comments, given the earlier constraints and the conversations we had on the telephone, and assure you that any written statements and anything else that you would like to include in the record will be included.

So, my good friend, John Klein, you may proceed.

PANEL CONSISTING OF SUFFOLK COUNTY OFFICIALS: JOHN V. N. KLEIN, SUFFOLK COUNTY EXECUTIVE; JOHN FLYNN, COMMISSIONER, DEPARTMENT OF ENVIRONMENTAL CONTROL; ARTHUR IMHOLZ, DEPUTY COMMISSIONER, DEPARTMENT OF ENVIRONMENTAL CONTROL; WILLIAM GRANER, CHIEF ENGINEER, DEPARTMENT OF ENVIRONMENTAL CONTROL; CARL SHAPIRO, PRINCIPAL ACCOUNTANT, DEPARTMENT OF ENVIRONMENTAL CONTROL; AND JOHN GULDIE, RESIDENT ENGINEER

Mr. KLEIN. Thank you.

Mr. Chairman, and gentlemen of the subcommittee. I am very grateful and I promise to be very brief.

I had a discussion with you, Congressman Ambro, indicating that I had two points that I wished to make here today, and then I will be delighted to exchange points of view with you.

Very briefly, the one thing that this project, as you are well aware. does not suffer from, is the lack of publicity and public attention.

Indeed, at last count there were about 14 investigations of one kind or another being conducted by a series of local, Federal, and State agencies.

Several of these investigations and reviews are being conducted by duly constituted and totally responsible agencies having a clear and direct interest and also direct jurisdiction.

The county is, of course, cooperating fully in each case.

However, as I mentioned to Mr. Kopecky, in anticipation of this hearing, your committee has expressed genuine concern with respect to issues involving this project and others like it across the Nation being conducted under the auspices of Federal legislation and Federal funding.

I, therefore, have an opportunity to address you today on two matters which have much less spectacular value from the standpoint of publicity than many of the other issues, but which are vitally important to this project and to the people of Suffolk County, and which have a direct application and relationship to other projects in the United States, which are similarly conducted under the auspices of your legislation and funding procedures.

The first relates to Federal funding and commitments by the Congress to full funding under existing Federal legislation. This project is eligible for and has received commitments for Federal and State aid to the extent of 85 percent of the cost of the disposal facilities. The 85 percent, of course, is 55 percent Federal, and 30 percent State. The problem with respect to the Federal aid is one well known to this committee and of deep concern to all of us—that is the level of appropriation by the Congress as opposed to the authorization.

Congress has appropriated funds to date only to the extent of 38.9 percent, and further appropriations by Congress are required to bring the total Federal aid to 55 percent.

The county's financing plan is predicated upon that Federal commitment for the full 55 percent. I need not, therefore, impress upon you the urgency and importance of congressional appropriations to the full extent of the commitment of 55 percent.

Mr. WRIGHT. Would the gentleman yield?

Mr. KLEIN. Yes, sir.

Mr. WRIGHT. I understood you to say that Congress has appropriated money only to the extent of 38 percent.

Let me understand what it is that you are saying.

You are saying we appropriated only 38 percent of the amounts that were authorized under the 1972 Act?

I do not completely understand.

Maybe you are saying from congressional appropriations the administrative agency has allocated only 38 percent of the cost of your program.

Mr. KLEIN. I can defer to any members of the panel, but I confess to you, Congressman, that I am not intimately familiar with the somewhat fine distinctions in congressional language.

Mr. WRIGHT. I do not want to be esoteric in terminology, but there is a distinction between what Congress appropriates for the total program.

We do not appropriate "on line" items for, as an example, sewer construction.

We appropriate a total sum.

Now, perhaps what you are saying was that from congressional appropriations the administrative agency has been able to allocate only 38 percent of the total cost of this project.

Mr. AMBRO. I think, if I may, and if you will, Mr. Chairman, yield, I think what the county executive is saying is thus far the the project has been funded to the tune of 67 percent of the 55 percent.

Mr. KLEIN. That is correct.

Mr. AMBRO. That you are entitled to a Federal share of 38 percent.

Is that correct?

Mr. KLEIN. That is correct.

The second issue pertains to legislation now pending in both Houses of Congress. I refer to H.R. 9560 and S. 2710. Contained within those two bills, in somewhat different form, are provisions which relate to financing of sewer district projects having enormous import to the Southwest Sewer District and projects of its kind in the northeastern United States.

Obviously, I need not tell you gentlemen of the committee of the impact of the State legislative moratorium on New York City obligations in the fall of 1975.

For those of us in the fiscal fallout area of New York City, interest rates on short-term borrowings went from 4 to 12 percent in a matter of weeks and many governments, including the State of New York, were denied access altogether to the municipal bond market.

Suffolk was able to obtain one bid on $54 million in sewer bonds in January of 1976 and paid an effective interest rate of 9.77 percent without the slightest change in our credit rating.

We were then able to obtain legislation authorizing negotiation of the sale of bonds with a pledge of future sales tax proceeds as security for the repayment of those bonds, and in August we sold $150 million of Southwest Sewer District bonds at an effective interest rate of 8.9 percent.

We are now in the process of negotiating a further bond issue of $70 million for the district and $30 million for the county general obligations to be issued in October with hopefully an improved interest rate over the July issuance.

However, 8.9 percent, the rate paid by us in July, is a far cry from the kind of interest rates which local governments can reasonably be expected to bear.

The bonds which were issued in July are 35-year bonds and the interest rates attributable to those bonds impact the residents of the Southwest Sewer District for the 35-year life of the bond.

Obviously, therefore, access to interest rates of lower amounts can make the tax burden of debt service for a local community considerably less onerous.

Nowhere is that principle more relevant than the southwest sewer district of Suffolk County, the largest single public works project in the history of the county.

The provisions of H.R. 9560 and S. 2710 reflect a concern for the very critical problem of interest rates for local government borrowings for public works projects of this kind.

We at the local level, for the reasons which I have just outlined to you, are strongly supportive of the concept of Federal legislation providing for access by local governments to long-term money for sewer projects at reasonable interest rates.

Obviously, the Congress, in adopting the Federal water pollution control legislation and providing the funding, did so for the purpose of encouraging local governments to engage in water pollution control projects.

I assure you that local governments who are contemplating this kind of project have been forced to think twice when they view their total vulnerability to the vagaries of the municipal bond market.

A backup device such as that contemplated in the two bills and as that originally contained in the 1972 legislation would obviously provide a strong element of reassurance to local communities that they cannot be burned by circumstances outside their own control as we have in this region.

Furthermore, those of us who are already committed to projects are desperately in need of assurances, as we continue to borrow to complete the project, that we will have access to long-term financing at reasonable rates of interest.

May I point out to you that one-half of 1 percent difference in an interest rate in this project on the remaining borrowings required would amount to $21 million savings to this district.

Every half a percent equals more than $21 million in saving.

I, therefore, welcome this opportunity to impress upon each of you the urgency and importance of prompt Federal completion of work on the two bills now pending in both Houses.

In accordance with our conversations, Congressman Ambro, I have kept this presentation as concise and direct as possible.

We would, of course, be pleased to exchange points of view with you on any of the other issues involved in the project and to put things perhaps into a perspective from the county government standpoint.

I thank you for your attention.

Mr. AMBRO. I would like to defer to the Chairman because I think although he cannot raise hopes here, he can at least tell you about a significant ingredient in the present bill which is in conference which might at least help.

Then we can get to, as you put it, an exchange of points of view.

Mr. WRIGHT. Yes, Mr. Chairman.

Mr. KLEIN. Mr. Chairman, I do earnestly believe that there is a provision in the House bill now in conference which could be helpful.

In fact, two members from New York State were the ones who sponsored and fostered this amendment: Mr. Nowak and Mr. Ambro.

It permits the EPA to make a guarantee of loans from the Federal Financing Bank for non-Federal share projects where the grantee cannot get funding at reasonable terms.

That is one-half of 1 percent above the current interest rate.

I believe you are well beyond that.

You could benefit from that.

This is where EPA determines there is reasonable assurance of repayment.

That is about all there is to it.

The Senate has a provision of somewhat similar scope, but the Senate bill would contain a requirement that would apply industrial cost recovery funds and reimburse the funds received by the grantee.

In other words, if you have industrial cost recovery funds here that you receive from industries, you would have to commit them to first payment on this loan.

I do not know, but I should think it might be both useful and timely if you were to contact the Senators from New York State.

One of them, I think Senator Buckley, is a member of that conference.

Mr. KLEIN. Yes, indeed. I have indeed discussed it with him.

He was responsibile for having that provision included in the Senate bill as it went to the floor.

I also discussed the matter personally with Senator Javits and, of course, with our own three Congressmen.

Mr. WRIGHT. That was the only suggestion I wanted to make.

Mr. AMBRO. Thank you, Mr. Chairman.

Mr. Klein, as you very well know—I just say Mr. Klein in order to have the record reflect a formal hearing.

I do not usually call you Mr. Klein.

We call each other many things.

Mr. KLEIN. None of which should appear on the record.

Mr. AMBRO. That is right.

These hearings touch on a variety of subjects that have come up before us.

We have talked about auditing, impacts on the environment, economic impacts, contracts, bonds, rates of money, and the like.

I wonder if you would mind if I asked a question of a couple of your colleagues here in order to permit them to exchange views with respect to earlier comments on all of this.

For example, we have a report from the GAO, which I commend to your reading, which tells us at the bottom line, that no performance or cost effective or, indeed, detailed audits have been conducted either by the district, by the county, by the State, or by the Federal Government.

Now, I think Mr. Shapiro heads a relatively new group within the Southwest Sewer District, an accounting staff which has some responsibility for looking into this project. Is that correct, Mr. Shapiro?

Mr. SHAPIRO. Yes. I handle all the accounting and check all of the claims and vouchers that are processed by the Department.

Mr. AMBRO. The kind of thing you do includes making a mathematical check of each voucher prior to payment?

Mr. SHAPIRO. Right.

Mr. AMBRO. You check the project contract to make certain the work or material claimed is part of the contract?

Mr. SHAPIRO. Right.

Mr. AMBRO. If the amount to be paid does not exceed the contract price?

Mr. SHAPIRO. Right.

Mr. AMBRO. You have never made, though, a field check or an audit; have you?

Mr. SHAPIRO. No.

We have never had a field check or an audit because my staff is insufficient to do so.

Mr. AMBRO. How large is your staff?

Mr. SHAPIRO. We have approximately three people on our staff that handle the Southwest Sewer District.

Mr. AMBRO. Well, do you think an audit is important?

Mr. SHAPIRO. When you are talking about field audits, besides just checking mathematics, we do get complete payroll records and every payment is checked against the payroll record to make sure the amount involved is exact.

In addition, the county audit and control department does verify the number of hours spent by each employee on the project per se, to make sure they do not work in excess of the normal number of hours since all overtime payments are paid by the contractors and not by the county.

We have not made a field audit per se. We do have engineering type personnel who are present and who verify and check the quantity shown on the periodical estimates. Every periodical estimate is checked and verified by field personnel. It is signed by them. It is then rechecked by the chief of construction to see if it is adequate and no changes have taken place since the original work was done, and then mathematically and otherwise check for propriety in connection with the contract.

So that, there is a field audit in the engineering sense and in the quantity sense.

The engineer does have logs, does have takeoffs, does verify the accuracy of the quantity, number of tons of asphalt that has been laid, the number of pipes that has been laid. We have a chargeback for failed and untested pipe which has run sometimes as high as $800,000 on a single estimate, which has been based on the failure to test or failure to pass a test.

So, we do have auditing in the engineering area with the engineer that knows the project.

Mr. AMBRO. What do you mean by "engineering?" You check the physical supply of materials against the contract. You check the price. You add up the tab. You see that it is signed off and you pay it.

Mr. SHAPIRO. That is right, but the man in the field actually watches them dump the asphalt, gets the truck ticket. He sees the size of the pipe and everything else. There is somebody on the scene

who is doing audit work, but he is an engineer who understands rather than an accountant. I would not know one size pipe from another.

Mr. AMBRO. But, it is not a performance audit.

Mr. SHAPIRO. No; it is not a performance audit.

Mr. AMBRO. It is not a cost effective audit.

Mr. SHAPIRO. No; it is based on the unit price contract which we have and he gets paid for every unit he puts on based on the unit price contract, if it is done properly and it fulfills the requirements and specifications.

Mr. AMBRO. Well, I have no doubt that the county has a check on the amount of supplies and materials that come in and the amount of money they pay for it. It is a relatively simple operation, which is not the kind of audit I know that the GAO is talking about.

I will move on to Mr. Imholz.

You represent the county contproller's office, but I think it is safe to say that there has or there is no annual audit in the sense that I just dealt with.

Mr. KLEIN. Excuse me; Mr. Imholz does not represent the county controller. He is a member of the staff of the DEC.

Mr. AMBRO. I am sorry. Yes; Mr. Imholz is Deputy Commissioner of the Department of Environmental Control.

Mr. Claussen is not here. Is there someone from the county controller's office here?

Mr. KLEIN. Not that I know of. I do not know whether contact was made with them or not; but, it was not requested of me.

Mr. AMBRO. Probably not. Then I will just say instead of asking questions, that the county controller I think tells us that there is no annual audit of each department. He says it is due to the staff size, and the project is reviewed only in, as Mr. Shapiro points out, the double checking of vouchers and signatures and things of that nature.

In any event, that is where the audit stops on the district and county level. There is an absence of an audit.

I do not know if you heard this on the State level and, by the same token, on the Federal level. Without question, we are going to have to address ourselves to that because I think that is something that each of us is intensely interested in.

Mr. KLEIN. Congressman, I must say that I am out of my field in talking about audits because I am a layman in that field. I am not entirely sure I know what you mean. As you obviously are aware, the accounts of the county are audited by the State at three intervals. The Department of Audit and Control makes some audits of debts.

We are now moving to an outside audit of county affairs by an outside firm, for which we requested proposals from major national accounting firms for an outside independent audit. Now, perhaps I am not perceiving what kind of audit you mean.

We will have a State audit, a county audit, and an outside individual audit of every operation of the county government. Beyond that, I am not certain I understand or grasp what issue you are talking about as something different in terms of an audit.

Mr. AMBRO. I, too, am a layman in this field and all I can do is provide you with a copy of the GAO report and devise in laymanlike terms the meaning of the cost effective or design audit or performance audit.

I think what we are talking about here is an accounting of the expenditures against materials which is done by the State and done by your own inhouse group, but it does not relate in an interdisciplinary way to contract performance standards, to design standards, to a relationship between costs and effectiveness of the project under the contract, which is the comprehensive kind of audit, not the simple kind of accounting of materials coming in and expenditures going out with proper vouchers and signatures, and additions and the like.

Mr. KLEIN. It seems to me that what we are talking about is something that is done as a matter of course, as a matter of contract.

Mr. AMBRO. I would like to develop that for the record.

Mr. KLEIN. If you are talking about performance, there is and the Commissioner or the chief engineer can describe in much more technical detail, there is a procedure for not only inspection of the quantity and quality of materials incorporated in the project, but also its performance in terms of the purpose for which it was designed.

Now, to what extent each component is inspected or audited as to that performance capability, I can defer to Commissioner Flynn or Mr. Graner.

Mr. AMBRO. I would just as soon hear from Mr. Flynn.

Mr. FLYNN. In the inspection of the project, the inspection is carried out by two forces. It is carried out by poeple, engineers and inspectors from Bowe, Walsh, and it is also carried out by an engineering force and an inspection force from the Department of Environmental Control.

In every case, the pipe is tested, the concrete pipe is tested, prior to its delivery from the yard.

It must be stamped by the engineer before it is delivered on the job.

When it is placed in the trench it is inspected to see that it is put in proper bedding, that the proper backfill takes place.

Upon completion of each manhole run, tests are run to determine the infiltration and exfiltration rates within that particular manhole run.

All of that must be completed prior to payment for any portion of that work.

Upon completion of any particular inceptor run when the as-built drawings are presented, the Department has a computer program whereby we can make a second hydraulic analysis of the pipe as installed to see that the pipe will carry the quantities of sewage for which it was designed and provide the velocity necessary to keep the solids in suspension.

With respect to the sewage treatment plant, in that case, most of the inspection staff consists of members of the Department of Environmental Control.

We have on the site mechanical engineers, electrical engineers, civil structural engineers, and civil engineers who specialize in sanitary engineering.

We also have an inspection staff.

Every truckload of concrete that comes in is checked. Slump tests are run on the concrete. If it does not meet the requirement, the truck is not accepted.

So, there is a continual inspection and review to determine that the quantities as asserted by the contracts have been installed and are the quantities which it says and there is an inspection to see that the construction is in performance with the specifications and plans.

Mr. AMBRO. Now, you say the responsibility is shared between you and the contractor.

Who has primary responsibility here and what is the size of your relative staffs?

How many contract inspectors do you have as opposed to those directly under your program?

Mr. FLYNN. The normal staff on a lateral contract, for example, the normal staff for the consulting engineer would be approximately 8 to 10 individuals, depending upon the difficulty of the work.

It would be at least one inspector from Suffolk County Department of Environmental Control.

In some cases, an engineer from the Department may come for two contracts. To answer your question, the ratio would be approximately 1 to 8.

Mr. AMBRO. A good deal of testimony was heard about the overall environmental and ecological impact of this.

I wonder if at this point in time, given all of the criticisms, Mr. Flynn, if you could just sum up as succinctly as possible your views with respect to the environmental and ecological impact of this sewage system project.

Mr. FLYNN. I will be glad to do that, although I am sure that my associates will wish that you had never asked that question because we are so sick and tired of responding to it.

Mr. AMBRO. If I could just interrupt you a second.

You could give us a brief statement since you have said it many times and I have heard you say it many times and then submit a lengthier statement or any kind of documentation for the record.

But, I would like to complete the record by giving you an opportunity to respond to all of the criticisms.

So, if you would like to do it that way, I would just as soon you did.

Mr. FLYNN. I would very much like to respond to what has been said this morning, because, in my opinion, a great deal of misinformation has been delivered to you gentlemen.

If I may, I will use the drawing of the Suffolk County Water Authority.

One of the subjects which came up repeatedly this morning was the question of the need for recharge.

I would like to point out that in 1962, when the first report was written by the Suffolk County Department of Health relative to the need for a sewer system in the five western towns, it was pointed out in that regard that recharge would have to be considered as an ultimate disposal method in the Southwest Sewer District, and in all subsequent sewer districts.

Suffolk County in this particular area, which is roughly a cross-section of the district, has a ground water elevation of approximately 70 or 80 feet above sea level.

Because of that type of fresh water above the surrounding salt, the fresh water continually flows into the offshore waters.

This area, which is indicated as the Magothy, you can see if you look here, this is Fire Island, and the toe of that Magothy extends some distance between 1½ and 2 miles offshore in the Atlantic Ocean.

When a comprehensive water supply plan was prepared by Holzmacher, McLendon & Murrell for the County of Suffolk, one of the problems that was given to them was to determine what would be the effect of sewering the entire county upon the water supply.

A model of a cross-section of the county was prepared by MIT. It was at the time, and probably still is the largest shore model that was ever constructed.

One of the problems that was placed on the model was what would occur if we were to take all of Suffolk County, every single home of Suffolk County, and discharge all that waste to sea.

The answer obtained from the model and the model has been verified by the USGS and other people who have studied it, the answer was that in 300 years the salt water, fresh water interface would move a half a mile onshore.

So, we do not regard at this time nor for many decades do we consider that it will be a problem, that there will be a problem of salt water intrusion, which will have an effect upon the water supply.

Now, a second item is the question of stream augmentation.

In 1972 when the work was commenced by the Department for the construction of the southwest, we hired a consultant by the name of O. L. Frockey.

Dr. Frockey had done the original work for the USGS in Nassau County. He made a study upon the effect of the sewer 7 years after. We had contracts with him and we have received three reports from him which have been paid for by the county.

This was to make a prediction of the effect of the sewering of the southwest.

His report indicated to us that we could expect a 6-inch to 2-foot drop along the shore and we could expect a 6- to 8-foot drop in the water table along the northern boundary.

The effect that will be felt from that will be that there will be a decrease in stream run.

Approximately 30 million gallons a day flows into that great south bay and it is estimated that there would be a 40 percent reduction in that or a loss of the 12 million gallons per day which are currently flowing into the bay.

The additional loss would be made up by the material which flows in between the streams and into the Great South Bay, thus setting up what is known as the salinity profile in the bay.

It should be pointed out that just on a year-to-year cyclic basis, depending upon whether it is a drought period or wet period, the amount of water flowing into the Great South Bay can vary anywhere from 190 million to 250 million gallons per day and we have had drought years when there has been a reduction considerably below the 30 million gallons that we are talking about and there is no reported data to indicate that there was any great effect upon the productivity of the shellfish industry in the Great South Bay.

Nevertheless, the county again, as early as 1972 hired Holzmacher, McClendon, and Murrell to perform a study of the Carll's River; the purpose of that study was to provide us with information necessary to carry out a stream augmentation program because we felt that that

would be the thing that would be first required to protect or to offset any environmental damage.

The study was completed by them.

It has been picked up by the 208 planning group, and their consulting firm by the name of Teff & Teff.

They are preparing a final model of the Carll's River.

We have recently agreed with the EPA to undertake a study of the Nanequet and the Santapog. We would do that with our own staff in-house so we could furnish additional information to Teff & Teff to develop the modeling of 3 miles of those particular streams in order to determine what stream augmentation program will be needed to be carried out and at what point in time we will have to enter into it.

So, there are two points I want to make.

First of all, the question of salt water intrusion. Salt water intrusion to an extent where it threatens the water supply, is something that is decades away, in my opinion.

In my opinion it is 100 years away before we need concern ourselves with it.

The county, incidentally, through its capital program funding made provisions for Fire Island on the Barrier Beach for a seven-well site with three wells at each site, which would be outpost wells into the Magothy, to catch at the earliest opportunity any movement of the salt water interface toward the mainland.

One final thing, and that is the question of use of the Magothy by the Suffolk County water authorities, as a source of water supply.

I would like to point out that in 1958, approximately 1958, 85 percent of the water obtained by the Suffolk County Water Authority in southwestern Suffolk came from the upper glacial aquifer. That became so polluted that it has been completely abandoned.

The water is withdrawn from the Magothy, and there is no assurance that the Magothy will remain uncontaminated.

In Nassau County, in the Magothy in those areas where sewers have not been installed, Magothy wells are 400, 500, and 600 feet deep, and a total of 25 already have failed to meet the standards for nitrates.

One final thing.

The question of sewers for the protection of the water supply has been discussed.

We need the sewers for the protection of the Great South Bay.

There is one other need for sewers that has not been discussed, and which should be understood.

If you were to take, for example, a cesspool that was 10 feet in diameter and the average family were to save all of their sewage for 1 year, you would have in front or wherever you have a cesspool, a 10-foot cylinder 240 feet high, which is raw sewage.

I think if someone were to go to the Southwest Sewer District and see 80,000 of those columns and be told by pushing a button they could drop them down into the water supply each year, I think the need for sewers should become at that point very apparent.

Another need arises. The need for expansion of the scavenger waste treatment service.

The cesspools are failing down there. They are failing in greater numbers all the time.

A failing cesspool causes a number of problems.

It not only creates problems with the runoff into the surrounding waters, in those areas where it is being carried away by storm water, but there is also the matter of dogs and children walking through the sewage from overflowing cesspools. There are areas down in that district where you cannot walk around the yard without walking in sewage and that, in itself, is a serious health problem.

I do not know if you have any more questions.

Mr. AMBRO. Just a wrap up.

I think from what you say it is your opinion that the criticism in terms of the need for this project—some people went so far as to recommend a moratorium—the design of this project, the impact not only on the fresh water pressure barrier, but the ground waters and the salinity, really on balance are not problems sufficient to warrant any consideration of a termination or a moratorium on this project.

I am talking about the environmental ecological impact, not the economic impact.

Is that correct?

Mr. FLYNN. Absolutely.

To declare a moratorium to stop this project would have a very, very serious environmental effect upon the surrounding area, as well as allowing the continuation of a very serious health problem.

Mr. AMBRO. And the recommendations for recharge, and whatever recommendations might be made in terms of length of the outfall are not really valid recommendations.

The design of this project, in your view, with the outfall part and the secondary treatment system, has the capability to do the job that it was intended to do under the original design.

Is that correct?

Mr. FLYNN. That is correct.

I would like to point out, too, in Suffolk County we have 103 sewage treatment plants.

Of those 103 sewage treatment plants with a total discharge of 14 million gallons, there are 90 of those treatment plants which are recharging as they are discharging their effluent back into the ground.

The total there is roughly 7.4 mgd.

So, currently 40 percent of the sewage we are collecting in Suffolk County right now is being returned to the ground.

Of those 90 plants that are doing that, 29 of them are advance waste treatment plants or tertiary plants where denitrification occurs prior to the discharge of the effluent.

That amounts to a total of approximately 1.75 million gallons per day.

Mr. AMBRO. Well, Mr. County Executive, I think your original characterization of our discussion was accurate.

We have exchanged views and Mr. Flynn's testimony comes diametrically opposed to that which was heard earlier today.

Mr. AMBRO. Mr. Wright?

Mr. WRIGHT. Yes.

I keep hearing testimony about engineering fees.

The GAO report indicates that one firm through July 31 of this year, a firm known as Bowe, Walsh & Associates, already has been paid about $30 million.

I gather that in addition another approximate $10 million has been paid to other consultants.

On page 13 of the GAO report you read the following:

> In June 1976, Price Waterhouse and Company estimated that the total costs of engineering services through project completion would amount to between $72 and $80 million.

Now, that is for engineering.

I certainly have no aversion to engineers.

I have a great respect for engineers.

I am just curious about something.

Any of you who were connected with the county government at the time of these engineering estimates, did it occur to you that that might seem fairly excessive?

Did anybody ever think that sounded like an awful lot of money to pay an engineering firm?

Mr. KLEIN. Mr. Chairman, I can give you a preliminary answer to that and then defer to my colleagues.

I may be in error, but I believe page 13, the reference by GAO to $72 and $80 million includes all engineering fees, including special services as well as design on a $612 million project of a rather complex nature.

I might give you a quick prospectus as to how that selection process is undertaken.

It was done, commencing in 1970, I believe, by the designation of the committee consisting of the presiding officer of the legislative body, which was me at the time, by the county executive, who was my predecessor, the director of planning of the county, by the commissioner of public works, and by the commissioner of the department of environmental control.

The selection criteria in terms of fees related to what was apparently clearly a then accepted practice not only by the county government and other local governments, but by indeed the State of New York and the Federal EPA, and that was to use the scale developed by the engineering industry nationwide, and those contracts were then entered into on that basis, predicated upon a review of various submissions or expressions of interest by engineers.

All of the awards were done on a unanimous basis by a bipartisan committee.

You would have no way of knowing the political persuasion of the members of that committee, but I would ask you to accept my representation that that is the case and it was done in each case on a unanimous basis.

It was not until, I understand, recently, based upon urging by the GAO, that the Federal EPA will not approve future awarding of contracts subject to Federal aid on a basis of cost percentages of the project.

But, you are now hearing from a former practicing lawyer who does not have the kind of expertise to make judgments as to the value of engineering services.

What I did do was rely, as did many others, including the former county executive, who was an engineer, I relied upon what were then generally accepted and utilized procedures, all of which, of course, were approved by the State of New York and the U.S. Government.

Mr. WRIGHT. I really was not asking about the procedures nor was I attempting to be critical in any sense.

I do not know the firm. I do not know anything about them.

I have to assume they are good people.

According to the GAO report the firm is selected on the basis of the evaluation of the questionnaires submitted by 59 consulting firms.

Presumably, you have had some experience with these firms.

GAO says the same firm had previously performed an engineering study for public sewage disposal facilities in the county and had been the consulting engineer to the Suffolk County Sewer Agency.

So, I do not quarrel about the selection of the firm.

What I am getting at is, you have already paid this firm $30 million.

Do you feel that you got your money's worth?

Mr. KLEIN. Are you asking me in my capacity as a layman or a public official?

Mr. WRIGHT. Public official.

Mr. KLEIN. I think so.

I think there has been a great deal of question raised about that.

This firm, indeed, was selected by the State of New York to do the basic underlying comprehensive review of the need for sewers in Suffolk County, western Suffolk County, and we are sure of one thing, and that is if there is anybody who believes that we did not get our money's worth, with the several investigations currently in progress, they have had the opportunity to indicate that.

Mr. WRIGHT. I think you misunderstand the direction of my questioning.

I am not saying it is a bad firm.

I am not asking if they are good people.

I am asking you if what they did for you was worth $30 million?

Mr. KLEIN. I think I answered that.

I have no indication that the services performed were not equal to the value of compensation paid.

They were in accordance with the prenegotiated contract.

The work was performed and the payments made.

Now, that may be oversimplistic, but I am trying to answer your question as directly as I can.

Yes.

If indeed there is some indication that it was not worth what we paid, that should certainly become evident from the multiplicity of the reviews that are now being made.

At this moment, however, I do not have such indication.

Mr. WRIGHT. Well, was the engineering firm's fee paid on the same basis that other costs were paid?

That is, out of bond money, money that was raised by bonds?

Mr. KLEIN. They are paid from general revenue sources for the District, which include the proceeds of bonds plus other revenues, including amortizing investments, which were considerable during the time.

Not only this firm is paid on that basis, but all the firms are paid on this basis.

Mr. WRIGHT. I am perhaps showing my ingorance of the real value that an engineering firms performs and certainly I believe any laborer is worthy of his hire, anyone who performs a service is entitled to be remunerated for those services.

It just occurs to me that with 83,000 families in the sewer system, $30 million already paid; the average household has obligated itself for $364 to the engineering firm.

If that money was paid out of these bonds and it is going to be amortized at that rather high rate of interest, it could be $750 per household.

I just am sort of curious as to whether a fee of that size or total fee is in the range of $72 million to $80 million to an engineering firm or a group of engineering firms amounts to something unusual?

If you take those figures of $80 million, which is the high figure, you would assume that the average household was paying $1,000, and if that were paid for out of bonds, 90 percent would be paying somewhere in the neighborhood of $2,500 to $3,000, the average household, for engineering work.

I am curious. That is all.

I just wonder if engineering fees of that magnitude are usual, customary, or if they are unusual. I should think, Mr Kopecky, that we might want to inquire of GAO and ask them to do an analysis for us on engineering fees paid on contracts and see how typical this is. It may be very typical.

I would be somewhat curious also as to how much money is expended by an engineering firm in pursuit of the contract, $30 million just seems like such an awful lot of money to me.

I wonder how much work was acutally performed. I wonder as to the salaries to the members the engineering firm has hired and all the different expenditures they have had. How much of it is profit? How long did it take to do the work? All that sort of thing. I should like to suggest we ask the GAO to make an inquire into that.

Mr. KLEIN. Congressman, might I reply to your question?

Mr. WRIGHT. Surely.

Mr. KLEIN. Because I think there is a fundamental problem with your premise.

You took the engineering firms and then extrapolated it into the cost per house in the district.

I would respectfully point out to you that a great deal of those engineering fees are not paid indeed by the houses in the district, but by the U.S. Government and by the State government.

Mr. WRIGHT. That makes it even more interesting to me.

Mr. KLEIN. That was the point I was driving at, Congressman, that we would certainly not have expended those fees at those rates under those contracts without the prior consent and approval of the U.S. Government and the State of New York.

Mr. WRIGHT. Mr. Klein, you are not saying to me that if it had been all county money, you would not have spent that much; are you?

Mr. KLEIN. Certainly not.

I would not make any such ludicrous suggestion.

What I would say to you, however, is that I think it is an unfair or somewhat unbalanced analysis to ascribe the full course of engineering fees to the burden on the district while not doing so with the construction costs and other costs.

Mr. WRIGHT. Let us do it fairly then, Mr. Kopecky.

Let us extrapolate enough information or ask the GAO to do so, to find out how much of this was attributed to local households and how much of it was paid by the U.S. taxpayers.

You know, we may find out that we got a good bargain. We may discover we really got our money's worth. We may discover we did not overpay anybody. I am not trying to leap to the conclusion that we did. It just strikes me as unusual and perhaps I am showing my lack of sophistication in implying that. It might be usual.

I am curious to discover if it is.

If it is commonplace practice throughout the United States for that kind of money to be paid to engineers and consultants, then I want to find out if the country is getting its money's worth. That is basically it.

Mr. KLEIN. Congressman, could I ask probably a very fundamental question?

I would presume that in your asking GAO to do so inherent in your request would be for GAO to make an analysis of the method and amounts paid on projects of a similar nature in this region by other local governments similarly funded by the Federal and State Governments, as well as across the country.

Mr. WRIGHT. I am not trying to point a finger of scorn to Suffolk County and indeed that was inherent in the suggestion that I have made for the directing of the request; that we check other communities and discover how common this is.

We may find this very common and that it is nothing unusual for an engineering firm to get $30 million in a project like this.

If so, I am curious to know how much is profit and how much of it has been actually expended. I am not antiprofit. I believe in the profit system. But, I am curious. That is all.

This has intrigued my curiosity; the sudden realization that engineering fees could go as high as $72 million or $80 million. I want to find out about it.

Mr. KLEIN. I would also say, yes, those are large numbers. So is the project cost. So is the amount of work required in order to justify that compensation.

I get the impression, and I am sure it is erroneous, that you are viewing the total amount of compensation of the engineer without reference to its relationship to the total cost of the project. I am sure that that is not correct, but I get that impression. Obviously, it is a large number if indeed it bears a disproportionate or inordinate relationship on the total cost.

Mr. WRIGHT. I understand it was based entirely upon the cost of the project. I am laboring under no illusion there. That was the basis on which compensation was determined under the terms of the contract.

I am not concerned about that. That very fact, I think is interesting.

I am curious to know whether that indeed could set up subtle incentives to make projects more costly. I hope that is not true and I am not casting aspersions upon the integrity of the engineering firm. I am simply raising the question, which I think is a question in which the interest of the taxpayers of the United States deserves a frank answer.

On page 15 of the GAO report it says:

> The GAO has consistently advocated that cost plus percentage of cost contracts should be avoided because they give contractors positive incentives to inflate contract costs to increase their profits. We reported our views of such contracts to EPA in August 1974 and again in May 1975. Since March 1, 1976, EPA has prohibited engineering contracts which base fees on a percentage of

construction costs, because such contracts provide no incentive for designing the most economical facility.

Now, in reciting that, I accept your statement that it was a common practice.

I am questioning for the purposes of the future whether it is a wise practice.

Mr. KLEIN. I understand.

Congressman, with your consent, Mr. Flynn, would like to make some comments with respect to this issue.

Mr. WRIGHT. Certainly.

Mr. FLYNN. The matter of the engineer increasing his fee, so to speak, by increasing the size of the project is something obviously people can speculate upon, but the fact is that there are provisions and there are means to prevent that.

Any plan that is prepared by the design engineer must first be submitted to the department of environmental control.

We have on our staff engineers again who are electrical, mechanical, civil, structural, hydraulic, as well as engineering technicians.

Every sewer site that is presented to us is checked on the computer to see that the design flow and the size is proper.

When we are satisfied with it, then those projects which are eligible projects or are subject to State and Federal aid, they, in turn, are sent to the New York State Department of Environmental Conservation and then to the Environmental Protection Agency and in both of those places engineers again review the basis of design.

So that the design by the engineer is reviewed on three levels prior to its ever going out to bid.

So, there is certainly not any opportunity for them to overdesign without at least three people picking it up.

Mr. WRIGHT. I understand that system.

Mr. FLYNN. I would like to just add one additional point with respect to the total engineering fees paid.

If you look at the cost of the job, which is approximately $660 million, or $606 million, it is normal in a public works project of that type, for the total engineering costs, including design and supervision of construction, to fall somewhere between 10 and 12 percent.

In planning for any type of project like that, that is normally the number that is used by any community which would be trying to determine what the total cost of that project would be.

Now, the figures which you have come up with fall within that 10 to 12 percent.

Mr. WRIGHT. That is right.

Mr. FLYNN. Well, that is a normal figure that those such projects run.

Mr. WRIGHT. I just wonder if there is not some kind of a curve where the percentage would decline a little bit as the total figure goes up.

Mr. FLYNN. The curves that we use, the ASCE curves, do decline as the amount of the job increases.

However, they plateau and level off at $100 million.

Mr. WRIGHT. $100 million?

Mr. FLYNN. That is correct. Yes.

Mr. WRIGHT. That is a pretty big figure.

Mr. FLYNN. Not $100 million fee, $100 million in construction.

On the curve that is applicable in Suffolk County, the 1968 ASCE curve, it was 5.2 percent at $100 million.

Mr. WRIGHT. Mr. Flynn, I appreciate that information.

I am not competent as an individual to judge the appropriateness of these fees.

They simply seem very high to me as a layman and that is the reason I am asking additional comparisons and inquiries be made.

W may discover that it is common practice.

But, I think we ought to find out.

Mr. FLYNN. I think it is a common practice among many professions, including attorneys' fees.

They charge a percentage of whatever moneys are either earned through a lawsuit or whatever, to collect the percentage of that.

So, percentage of a project cost for fees is not unusual.

Mr. WRIGHT. Of course, that is true, Mr. Flynn, and I am not at all unaware of contingency fees and lawsuits and things like that.

In this instance, however, it is the taxpayers' money we are talking about. We are not talking about a private person wanting to take a gamble with a lawyer as to whether he can win a lawsuit.

We are talking about an expenditure of the taxpayers' money.

I see my personal responsibility to be interested in a wise expenditure and prudent expenditure, and an economical expenditure of the taxpayers' money.

That is all.

Mr. KLEIN. Mr. Congressman, may I also make one other point, which I think is directly relevant to your concern of the relationship to the engineering fee dollar amount versus project cost?

I would ask you not to lose sight of the fact, and I am sure your staff has informed you of this or at least has this information available for you, that within the engineering fees are fees for services in addition to design.

Mr. WRIGHT. Supervision.

Mr. KLEIN. Correct, and special services.

The point I am driving at is that the county is currently evaluating utilization of county personnel on these special services on direct payroll.

Obviously, there would still be an expenditure. Our analysis has not yet convinced us it would be more or less.

What I am saying to you is had the county opted from the inception of this project to utilize county personnel on payroll for services which were contracted for, the amount of engineering fees would have been monetarily significantly less.

Therefore, it is, I think, misleading to view the engineering fees as being totally related to design, which in turn is related to the cost of the project.

We are not confident at this point that we can prove that it is less expensive or more expensive for these services to be on payroll, but had they been from the inception the dollar amount to the engineer would have been significantly less.

Mr. WRIGHT. I should not want to mislead anybody.

I really do not see how one could conclude that I have said anything that was misleading since I have reached no conclusions.

I have simply asked questions.

Mr. KLEIN. That is what I hope was the point.

Mr. WRIGHT. I do think it is important.

Let me find out if one firm gets paid $30 million, how much that firm expended, how many people it employed, how much work it did to earn that $30 million, how much of that is profit.

I think that is a valid question.

Mr. KLEIN. I agree.

Mr. WRIGHT. The purpose of the water pollution program for which we appropriate Federal taxpayers' money is to help communities such as your own to clean up the wastes and purify the waters to protect the public.

Now, I am not suggesting the firm has been unjustly enriched.

Initially, I was prepared to drop it after having suggested the inquiries for the GAO to make.

The subsequent colloquies have broadened the scope of the discussion and I am perfectly willing to sit here all afternoon and discuss it with you.

I am perfectly willing to let it drop right now.

I should not want anyone to suggest, though, that I was misleading anybody because I have not misled anybody.

I have just asked questions and I think that they are valid questions.

I think they are questions to which the people of the United States deserve an answer.

Mr. KLEIN. I did not intend to implicate that you misled anybody.

I have attempted to do what Mr. Kopecky advised me was my function; to provide you with assistance and perspective. I am trying very hard to do that, Mr. Congressman.

Mr. WRIGHT. I appreciate your patience with us and the information you have disclosed to us.

You have done a fine job of helping us to understand this problem.

Thank you for that.

Mr. AMBRO. I think one of the problems here, John, is that according to the DEC breakdown expenditures on the project through April 30, 1976, we have an outgo of money of $181,199,818.

The figure of $30 million, even though it is incomprehensible to those of us who are grossly underpaid——

Mr. KLEIN. I am glad you used the pronoun "us."

Mr. AMBRO. Well, I did.

The $30 million paid out at this point with respect to that figure seems exhorbitantly high.

I think that is really the crux of this. It may not be.

Indeed, I would hope, Mr. Chairman, that the analysis by the GAO might also include how much money in dollars at this point in the project is paid out in engineering fees, vis-a-vis the amount of money that is paid out in construction costs, so that maybe we can see related to other projects in the United States how much off we might be in terms of these incomprehensible figures.

Mr. KLEIN. May I ask Commissioner Flynn to address himself to the question of front-ending engineering fees?

I think that may be helpful in your concern.

Mr. AMBRO. Surely.

Mr. FLYNN. The basis on which the engineer is paid is a design fee of roughly 5.3 percent.

He is paid 20 percent of his fee upon completion of preliminary engineering report. Upon completion of the design specifications to a point where the project is ready for bid he is paid 80 percent.

When the project is bid upon and the contract is awarded he is paid 90 percent.

Now, when you see the $30 million versus the $180 million, the fact is that the design of the project is well in advance of the release of the construction contract.

Mr. AMBRO. Does that breakdown as you pay, include at each step costs for supervision, inspection, and things like that?

Mr. FLYNN. No.

Mr. AMBRO. That leaves 10 percent then.

Mr. FLYNN. No.

The final 10 percent is for consulting services during construction.

Now, these are not inspection services.

Consulting services during construction are for those instances where it may be necessary to alter a plan because of field conditions encountered, where it may be necessary to interpret a plan, where it is necessary to review shop drawings for special structures that may be installed in the project.

Mr. AMBRO. Well, I really do not want to belabor this because I just wanted to wrap up with one question, if I can, and then move on to the EPA.

It is not that I mean to cut it off, but I think we have pursued it at great length.

Is it true that the design costs at this point in time equal special service costs?

Mr. SHAPIRO. No.

I have the figures here as of August 31.

I would like to point out the fact that actually the fee of $30 million is not versus $181 million, which is dated April, but as of July 31.

There was a great sum of money between April and July that was paid.

In fact, we have an August report that has been submitted to the GAO and the other authorities which indicates that there is $207 million expended as of August 31, and that the total engineering fees are $38 million against $207 million total as of August 31.

These have been supplied to various parties.

Out of that amount $18 million is design fee for all consultants on all portions of the southwest sewer project.

The remainder of the $19 million has been spent on special services and other work.

Mr. AMBRO. What was the last figure?

Mr. SHAPIRO. The total amount expended actually is $38,705,985.10 as of August 31, of which the design fees earned were $18,876,855.03, and less a retainage amount, which is retained in the early portion of the contract, and the actual payment of design fees was $18,009,022.32.

These are the figures as of August 31.

Mr. AMBRO. And the balance is?

Mr. SHAPIRO. That is it.

This is the total amount.

It is $38 million less $18 million and the rest is for special services, subcontracting, and other special services.

Mr. AMBRO. That is $20 million?

Mr. SHAPIRO. Approximately, yes.

Mr. AMBRO. The statement was approximately correct.

Mr. SHAPIRO. But, the time element is quite different.

The design fees are paid before the job is done, whereas the construction fees and inspection fees are done during the time of the construction.

So, there is no real time relationship between the two numbers.

Mr. AMBRO. Well, I just wonder, Mr. Klein, with respect to the time that you have been involved in all of this, the time that you have responded to criticisms, and attended hearings of this nature, the times that you have gone to Washington seeking funds, the times that the local taxpayers tell us the costs are too high—some people say 60 cents per hundred of real value to $1.38 per hundred of real value, $20 a foot for hookup—all of the political screams you get for seeking a 1-percent increase in sales tax, criticism that the district is both losing homes and keeping homes and business out by virtue of the costs, the attacks by other public officials, all of the criminal investgations involved, even offset by Mr. Flynn's evaluation that it has a beneficial environmental impact, do you think the Southwest Sewer District on balance is worth it?

Please answer in one word or less.

Mr. KLEIN. Yes.

I can add a couple of words.

First of all, as you are well aware, Congressman, this is a project which dropped into my lap in this new position of fame, fortune, and popularity that I now occupy.

But, I really believe that this project is a reponse by a local community with encouragement by the Federal and State government to deal with a clear environmental and health concern and that, in a word, is to discontinue discharging 30 million gallons of raw human waste per day into the container from which we draw our drinking water and into the largest single natural resource of the county: the Great South Bay.

I could have thought of a lot of other ways that I would have liked to have spent my time since last October when the roof fell in on the bond market and threw the entire project financing into dislocation, but it is a job that must be done.

It is my responsibility to make my best judgment as to how and whether it should be done, all of which leads me to answer your question in the affirmative.

Mr. AMBRO. Well, I appreciate it.

I can sympathize with the things you have been through.

In good measure, I have been through an awful lot of them, too.

These hearings are not only investigative in nature, but they also can serve, even in the face of all of the criticism and the hostility, a very useful purpose, not only legislatively, but in terms of helping financially with formula changes, with appropriations to implement existing law, with increases from 55 to 75 percent, even though at some points in time it seems as if it would never pass, with the amendment that Congressman Wright suggested that might be applied to this project, with other amendments to water resources which might be used to do the things that we heard about earlier from environmentalists.

We are bringing, therefore, into this county a larger flow of Federal money and helping to, as our illustrious President is fond of saying, bailout the project, and we are certainly easing an already oppressed taxpayer in the district and indeed throughout Suffolk County, who might be liable if anything catastrophic happens here.

So, hopefully, all of the kinds of negative views that come from this might assure that through legislation, that the oversight is better, the quality is better, the practices and policies are better, but also funding might be better.

Again, I hate to give anyone false hope of putting them in a period of rising expectations, but I hope something on balance could develop to insure environmental benefit, to stabilize costs, and to come up with a project that does all of these things that each of us hopes to have accomplished.

So, we all sit here and listen now, and hopefully all of the information generated, some of which is quite startling, I think, might have a good effect.

It might have a good effect here, but certainly it will have a better effect in terms of all of the projects throughout the United States.

Mr. KLEIN. My concluding remark is, if we could have converted the expressions of interest and outrage into dollars, we would not all be here today.

But, we are not able to do that.

I am convinced of your genuine concern with those portions of the outcome of these hearings which indeed can be of value not only to Suffolk County in the Southwest Sewer District, but projects of its kind.

It is for that reason I took the liberty of exercising the option of making the few points that I did at the inception and they can indeed be extremely important to the future of the financial liability of local governments all across the country.

Mr. AMBRO. Given our limited salaries, we all pay taxes.

I appreciate your coming here today, and I appreciate all of your testimony.

Again, I encourage any kind of document, written statement, for the record.

I urge you to do that in order to respond, if you like, or comment on anything that has been said thus far.

Mr. KLEIN. Thank you very much.

Mr. AMBRO. Lastly, I would like to call forward the representatives of the Environmental Protection Agency, Mr. Gerald M. Hansler and his associates.

You have an awful lot to comment on. I do not know how you would like to work it. It is late in the day.

You are last before us and deliberately so, because we wanted to give you the opportunity since you have direct Federal oversight responsibility for this project, to comment last.

If you would suggest a procedure, it will be fine with me.

You can comment now, take up each point individually, and make the record complete as best you can with a verbal statement and augment it, since we have 2 weeks to provide statements, by anything else you would like to submit later.

PANEL CONSISTING OF GERALD M. HANSLER, REGIONAL ADMINISTRATOR, REGION II, U.S. ENVIRONMENTAL PROTECTION AGENCY; DAVID LUOMA, DIRECTOR, WATER PROGRAMS, REGION II, U.S. ENVIRONMENTAL PROTECTION AGENCY; RICHARD SALKIE, CHIEF, NEW YORK CONSTRUCTION GRANTS BRANCH, U.S. ENVIRONMENTAL PROTECTION AGENCY; RICHARD L. CASPE, CHIEF, NEW YORK GRANTS SECTION, U.S. ENVIRONMENTAL PROTECTION AGENCY; AND PAUL MOLINERI, PROJECT ENGINEER, U.S. ENVIRONMENTAL PROTECTION AGENCY

Mr. HANSLER. Thank you, Chairman Ambro.

We did prepare a statement in advance.

It was delivered to Mr. Kopecky last night in sufficient quantities for the subcommittee members we thought would attend.

I am sorry that we could not get it into your hands 48 hours in advance, but, as you understand, everybody has been rushing around with the closing days of the congressional session.

There have been several billion dollars involved in other projects we have here in EPA region II as well as Suffolk County, which has taken a lot of time.

We appreciate this opportunity to discuss with you, and anyone that has testified here, the issues surrounding the southwest suffolk project.

Mr. AMBRO. I wonder, Mr. Hansler, if you would just suspend for a minute.

This is your written statement.

Mr. HANSLER. Yes.

I am not going to read it.

Mr. AMBRO. I understand that.

At this point, without objection, I would like to include the entire statement in the record with, of course, the complete understanding that you can augment it during this 2-week period in any way you want.

[The statement referred to follows:]

STATEMENT OF GERALD M. HANSLER, P.E., REGIONAL ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY, REGION II

Mr. Chairman, I appreciate this opportunity to discuss with you and the subcommittee members the Suffolk County Southwest Sewer District project.

Congressional as well as local interest in this matter has been high for several months now, and many questions have already been raised by Messrs. Kopecky and Prolman of your Subcommittee staff. Though other specific questions or issues may be aired today upon which we may shed some light, we believe it important that matters already raised be "fleshed out" with facts.

Following are those important facts concerning this project. I will not burden the Subcommittee by reading the statement, but hereby present it for the record.

Accompanying me to address any specific technical questions are:

David A. Luoma, Director, Facilities Technology Division.

Richard C. Salkie, Chief, New York Construction Grants Branch.

Richard L. Caspe, Chief, Metropolitan New York Construction Grants Section.

Paul J. Molinari, Project Engineer, Metropolitan New York Construction Grants Section.

Also present to represent the Environmental Protection Agency (EPA), should any questions regarding national construction grants program issues be raised, is John Rhett, Deputy Assistant Administrator for Water Program Operations.

I. HISTORY

In January 1962 Suffolk County published a report on the need and feasibility for public sewage disposal facilities in western Suffolk County. The objective of this report was to gather all pertinent data necessary to make a determination of the need for the extent of such facilities. The report indicated an urgent need for sewers in the Five Western Towns due to rapidly increasing population coupled with evidence of domestic and industrial waste materials in the water supplies of the more populated areas. This proposal to develop a rational plan for collection, treatment and disposal of wastewater also recognized the need for protecting and preserving water resources for both water supply and recreational uses. Through the recommendations of this report, a further detailed investigation for comprehensive sewage planning was to be undertaken.

In August 1963, an engineering contract was executed by Suffolk County with the New York State Department of Health pursuant to Article 12, Section 1263–a, of the Public Health Law to prepare a comprehensive study and report of sewage facility requirements in the Five Western Towns of Suffolk County, This project was designated by the State as WPC–CS–20. The comprehensive report, consisting of 12 volumes, was completed in 1965. It proposed ten disposal districts covering the Five Western Towns of Suffolk County. Comprehensive Sewerage Plans were included for each of the disposal districts as well as appendices on alternate studies, recharge considerations and other pertinent subjects necessary for comprehensive planning in these areas. Subsequent to the approval of this Comprehensive Report, a program was initiated by the County, pursuant to the recommendations of the report, to establish County Sewer Districts in the more densely populated areas, especially the Disposal District No. 1 area.

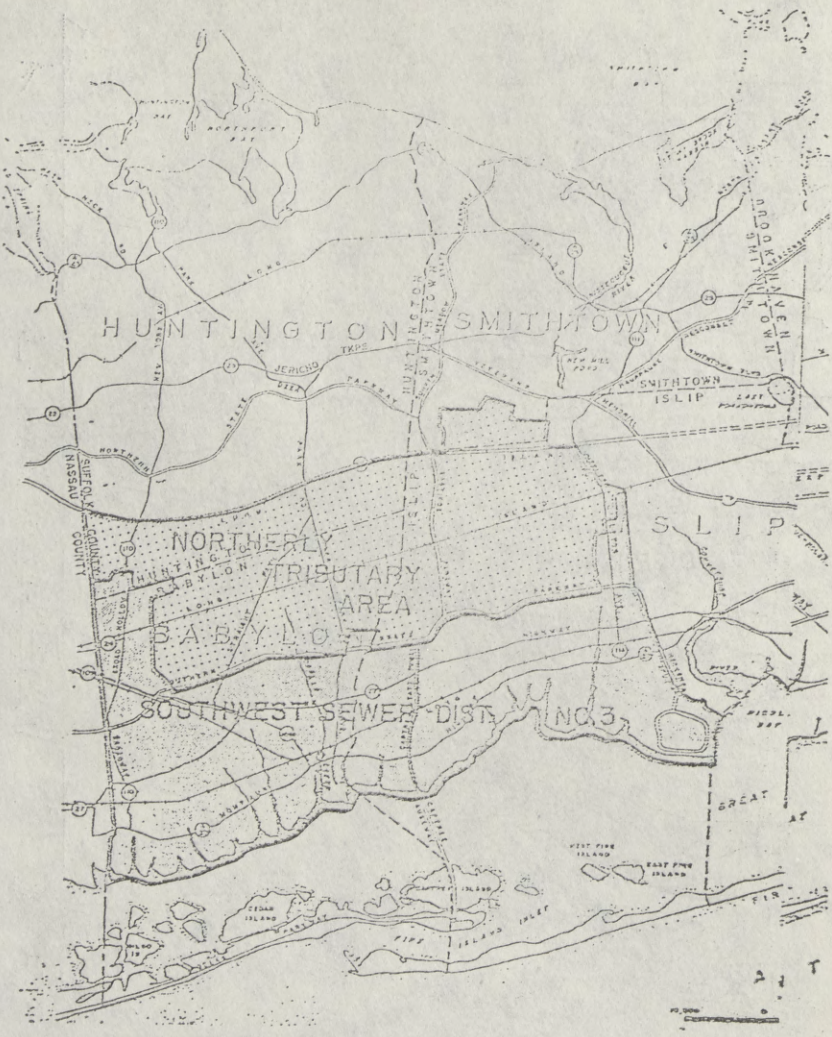
In September 1966 an engineering report was completed for public hearing on establishing Suffolk County Sewer District No. 1. This proposed Sewer District No. 1 was established and presented in the Comprehensive Report, WPC–CS–20, as Disposal District No. 1. A public referendum was held on this proposed district in November 1967, and it was defeated by a margin of approximately six to one. Subsequent to this defeat, the County, through the newly-created Suffolk County Sewer Agency, undertook an evaluation of the areas being served and developed a modified district based upon the 1966 plan and alternatives as presented in the Comprehensive Plan.

In March 1969 the engineering report, altering the previously recommended boundaries of Disposal District No. 1, was completed for the Suffolk County Sewer Agency. The new boundaries were consistent with the urgent need for public sewers, especially in high groundwater areas, and also considered the need for comprehensive planning of such systems. This proposed district was called the Suffolk County Southwest Sewer District No. 3.

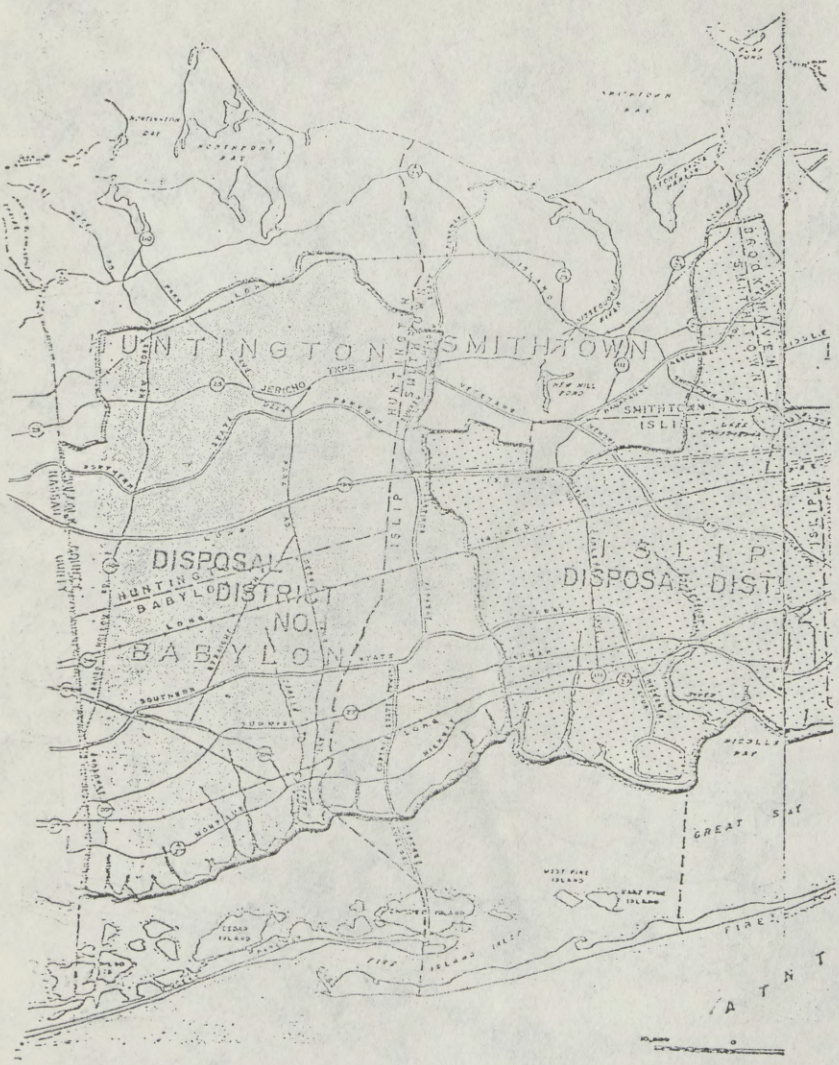
Maps showing the original proposed Disposal District No. 1, and the Southwest Sewer District No. 3 with its Northern Tributary Area (NTA)* are attached. The Southwest Sewer District No. 3 was presented to the people and approved by referendum in November 1969.

---

*The Northern Tributary Area was included in the design of intercepting sewers and outfall sewer to insure conformance of the proposed sewer district with comprehensive regional planning for the area.



Configuration of the Southwest Sewer District



Original Configuration Sewer District No. 1

II. FEDERAL GRANT ACTIONS

A. To date the following grant actions have been taken by the Environmental Protection Agency.

Project No. C–36–624

1. This project is for the construction of a secondary wastewater treatment plant, outfall sewer, intercepting sewers, pumping station and force mains.
2. Major Federal actions:

(*a*) Total eligible cost: $210,900,000; Federal grant offer: $10,000,000 (4.7%); action: Grant offer; date: March 26, 1971.

(*b*) Total eligible cost: $210,900,000; Federal grant offer: $1,000,000 action: Section 8(F) increase; date: February 24, 1972; total Federal grant: $11,000,000 (5.2%).

(c) Total eligible cost: $307,600,000; Federal grant offer: $79,090,000; action: Section 206 reimbursement; date: March 15, 1974; total Federal grant: $90,090,000 (29.6%).

(d) Total eligible cost: $307,600,000; Federal grant offer: $29,593,000; action: Section 206 reimbursement; date: June 9, 1975; total Federal grant: $119,683,900 (38.9%).

B. The following grant actions are expected to occur some time in the future.

Project No. C–36–1036

1. This project is for the construction of interceptor sewers, pumping stations, and collection systems for the Southwest Sewer District not funded under Project C–36–624 nor yet built.

2. An application for the total project has been submitted and is currently under review by this office. This project will be phase-constructed to correspond with the timely development of the construction contract documents. To date contracts for Phase I construction have been submitted.

3. Estimated Eligible Project Costs:

(a) Phase I: $44,815,560; Federal grant: $33,611,670.

(b) Phase II: $38,124,560; Federal grant: $28,593,420.

(c) Phase III: $62,921,080; Federal grant: $47,190,810.

III. DESIGN OF THE PROJECT

A. Tributary Area

EPA, Region II, and the New York State Department of Environmental Conservation (NYSDEC) have long been aware of the need for proper regional planning. It was with this need for proper planning in mind that the Comprehensive Sewage Study for the Five Western Towns was embarked upon. While Sewer District No. 1, the original service plan for an area including much of the present Southwest Sewer District, was disapproved by the voting populace, and a smaller and somewhat different construction program approved, this in no way caused NYSDEC nor EPA to deviate from the goal of proper planning to best meet the pollution abatement goals of the entire region. With this in mind, it was required that treatment works not easily expandable (i.e., sewers) be designed to convey ultimate tributary flows. While the Southwest Sewer District eliminated areas north of the Southern State Parkway from its initial service area the County was directed to plan in some manner for these areas. It was determined that sewers be sized to serve the Northern Tributary Areas, which naturally drain toward Southwest Sewer District No. 3. The NTA was, however, modified slightly to exclude most of the drainage area north of the Long Island Expressway, a physical boundary in the County. This change was accepted based on alternate plans for the area and the limited population expected in the future.

B. Population Projections

Projections of tributary populations (including actual domestic populations and population equivalents arising from commercial, industrial, academic, etc.) have risen from the preliminary estimates made in the 1969 "Engineering Report for the Proposed Suffolk County Southwest Sewer District" of 555,056 (year 2015) as more detailed analyses of specific drainage zones have been prepared. Latest estimates of total tributary population equivalent developed from "Comprehensive Studies of Population and Flows" are an ultimate 959,177 people. This latest population estimate has been received by this Agency with the approval of the NYSDEC and the Nassau-Suffolk Regional Planning Board. Considering the depth of review exerted by these two planning entities this agency has seen no reason for further detailed review of these projections. With a 1970 existing domestic population of over 388,000 people in the total tributary area, and a total existing population equivalent (flows from other than domestic sources) in the Southwest Sewer District alone of over 126,000, this Agency does not consider this projection excessive. Additionally, comparison of the methodology used in developing projections with that of other planning groups (Water Pollution Control Federation Manual of Practice, as well as other similar communities) has shown Southwest Sewer District projects to have been developed in an acceptable manner.

C. Sewer Hydraulics

As a result of sizing sewers for the ultimate tributary flows, pipes will in some cases (seven out of 19 North-South Interceptors) be much larger than required to handle existing flows (four other interceptors are affected as well, but to a lesser extent). This is an occurrence often encountered when the downstream portions

of a system are designed for the needs of a whole region. Velocities of flow in these pipes will be less than required to provide self-cleansing of the pipes. This means periodic flushing will be needed during operation to keep these lines clean. In addition, velocities may be slow enough to produce septicity problems in lower portions of interceptors and at the treatment plant influent. If necessary, odors emanating from this condition can and will be alleviated by chlorination of sewage at upstream dosing locations. This condition has already been considered in the treatment plant design, where the facility for pre-chlorination of raw sewage has been provided. When weighed against the severe environmental disruption and additional costs which would occur from constructing sewers sized only for present tributary areas and coming back at some later date to parallel them with sewers to pick up other tributary areas, the required maintenance is a minimal investment.

This Region of EPA in April 1975 prepared a general report on the cost of sewer construction versus the size of the pipe. This analysis, which considered some *83* interceptor contractors bid in New York State, concluded that, "In order to double interceptor capacity in smaller sizes (12″ diameter to 27″ diameter) a contract cost increase of 10.2% was realized. In the middle sizes (30″ to 54″) the contract cost increased by 15.1%" With the results of this analysis in mind, it is cost effective to build interceptors that are sized to handle ultimate flows.

IV. ENVIRONMENTAL PROJECT CONSIDERATIONS

Because of the general sandy nature of Long Island subsoils, septic tanks, followed by one or more cesspools for leaching of the effluent, have long been the traditional method of sewage disposal. However, in much of the Southwest Sewer District, the septic tank-cesspool method is not suited to prevailing hydrogeologic conditions.

The shallowest septic tank-cesspool system generally requires a minimum unsaturated soil depth of 5.5 feet. Approximately 22% (12.8 sq. mi.) of the geographic Southwest Sewer District lies at or with 5.5 feet of groundwater, and thus does not meet current standards for proper septic tank-cesspool system installation.

Adequate cesspool disposal of waste depends heavily on the dilution capability of groundwater recharge and movement. In order to insure a water supply with nitrate (NO_3-N) levels below 10 ppm (New York State Department of Health Drinking Water Standards) the average household of 3.8 people utilizing subsurface waste disposal would require the dilution capacity of approximately 0.7 acres of groundwater recharge. This is equivalent to a population density of 5.4 people/acre.

No health hazards have been declared in the Southwest Sewer District by the Suffolk County Department of Health Services, nor has the Department of Health Services documented any ill effects attributable to the existing method of subsurface sewage disposal. Nevertheless several potential health hazards do exist.

The major visible health hazard in unsewered areas results from septic tank-cesspool system failure. This is manifested by backup of sewage in homes and inability to use bathroom, kitchen and laundry facilities; overflows at the ground surface; and illegal direct discharges to dry sanitary sewers, storm drains, and surface waters.

The illegal introduction of sulphuric acids and organic solvents in an attempt to solve system failure results in further pollution of the groundwaters.

The most publicized potential hazard is that of infantile methemoglobinemia (blue baby disease) from nitrates in the drinking water. The regional "208" study has preliminarily estimated that subsurface sewage disposal systems contribute about 95 mg/l total nitrogen compared to the State Drinking Water Standard of 10 mg/l nitrate (as N).

Nitrate levels in the Glacial Aquifer within the District generally range from 2.0 to 6.0 mg/l and in the Magothy Aquifer are less than 0.1 mg/l.

With the preceding in mind, the 1972 EPA Environmental Impact Statement reached the following conclusions and recommendations which still pertain today:

A. Conclusions

1. The construction and operation of collection systems and effective wastewater treatment facilities are essential to the protection of Long Island's water supply.

2. As soon as the technology is demonstrated, it would be advantageous for Long Island to implement groundwater recharge for the optimum utilization of its water resources.

3. A concerted effort must be made to preserve the remaining marshland habitat.

4. Water resource planning and management programs for all of Long Island must be implemented to insure both effective and efficient utilization of available water resources. At the present time, the interim metropolitan and basin plans required by Federal regulations are necessarily limited to the effects of specific treatment plants and ancillary equipment. It is imperative that the planning and management program for all of Long Island be completed as expeditiously as possible for inclusion in fully developed plans by July 1, 1973.

5. Maximum utilization of available water resources necessitates the use of a combined system of groundwater recharge and ocean discharge of treated wastewater. Ocean outfalls are required backup facilities for groundwater recharge because of the problems associated with plant failure. Until such time as the technology for wastewater treatment and recharge has been both fully developed and implemented, disposal of all treated effluent to the ocean is the only feasible alternative.

B. Recommendations

1. Proceed as expeditiously as possible with the construction and operation of properly designed collection, treatment and disposal facilities in accordance with the principles embodied in this environmental impact statement.

2. As soon as the results of the EPA-sponsored Wantagh feasibility study are known, a full-scale (about 5 mgd) project should be undertaken to demonstrate the reliability and consistent attainment of high levels of treatment, including nitrogen removal, and groundwater recharge of treated wastewater.

3. The construction of wastewater treatment facilities should not utilize marshlands.

4. To insure that growth is consistent with the maintenance of environmental quality, planning for Nassau and Suffolk Counties should include:

(*a*) The accurate determination of both the population levels and the industrial wasteloads that can be supported by available natural resources, and

(*b*) The development of controls to insure that domestic and industrial wasteloads do not exceed the environment's capacity to support them.

The New York State Department of Environmental Conservation should exercise its functions on Long Island to promote and coordinate management of water, land and air resources to assure their protection, enhancement, provision, allocation and balanced utilization consistent with the environmental policy of the State.

5. It is recommended that a combined system of groundwater recharge and ocean discharge be developed for the disposal of treated wastewater. Investigations to determine which areas require groundwater recharge and the optimum methods of recharge for the affected areas should be actively pursued. Until such time as the technology has been fully demonstrated and recharge has been implemented, it is recommended that ocean outfalls be utilized as the only feasible alternative.

Please note that on June 29, 1976 a Federal construction grant (C–36–982) totalling $24,588,497 (total eligible cost $32,784,662) was awarded for construction of a 5.5 mgd full-scale wastewater recharge demonstration project at Wantagh (Cedar Creek) Nassau County, New York. In addition, this Agency on June 9, 1975 extended a planning grant under Section 208 of the Act to the Nassau-Suffolk Regional Planning Board. One of the major objectives of this plan is to investigate and determine which areas of Long Island require groundwater recharge as well as methods of attaining a workable recharge program.

The National Environmental Policy Act (NEPA) regulations do not require that ongoing projects funded prior to July 1, 1975 comply with the current criteria. However, they do allow the Regional Administrator to apply new criteria when he considers it appropriate. In keeping with the spirit of NEPA I directed that a complete environmental review be accomplished on the Southwest Sewer District outfall sewer and its proposed routing. The review resulted in several changes to the proposed contract including but not limited to those required to restore tidal wetlands, those required to avoid adverse effects on a tern nesting area, those required to protect shellfish in the vicinity of the outfall from suffocation and loss of productivity and those required to prevent interference with currents in Great South Bay. This review was reinstituted even though the Agency in July 1972 had published an "Environmental Impact Statement on Waste Water Treatment Facilities Construction Grants for Nassau and Suffolk Counties, New York" which addressed the outfall sewer.

V. INTEGRITY OF CONSTRUCTION

As a result of serious allegations concerning the structural and hydraulic integrity of Contract I–9 and a lack of information by the Region with which to refute or concur with them, the Agency by letter dated July 15, 1976 required that:

1. The sewer line be dewatered and prepared for a television inspection which should be recorded on a continuous video tape.
2. The sewer line be re-tested in accordance with Section D.S. 83, Infiltration and Exfiltration Tests, of the contract specifications.
3. Both the NYSDEC and the EPA be notified of the dates when this work would be performed so that representatives from each Agency could be present.
4. If the tests indicated that repairs were necessary to assure the integrity of the pipeline, the County of Suffolk would perform the necessary corrective actions in a method acceptable both to NYSDEC and EPA.

The specified tests have been performed. In addition, a hydraulic analysis of the capability of the sewer as constructed to handle minimum, average and maximum hydraulic loadings has been performed. The hydraulic analysis performed on the eligible portion of the contract has shown the pipeline to be acceptable. The television inspection of the pipeline has shown a job of acceptable workmanship on the portion of the contract on which Federal funds were granted.

Twelve joint leaks were located within this length of 14,326 feet. These leaks varied from substantial to barely noticeable drips. The pipeline was tested for infiltration prior to any repair being made and passed based upon an allowable infiltration of 150 gallons per inch diameter per mile per day as specified in the contract (14,666 allowable, 11,675 actual). Ineligible portions of the contract initially failed the infiltration test. Repairs were made such that an overall test of the entire contract passed (allowable 19,604, initial 21,219, final after repairs 19,248). Tapes of eligible sewer lines revealed no sign of any structural problems. This Agency has received a copy of the video tapes for the entire eligible portion of the contract. This copy is available upon request to the Subcommittee.

It should be noted that even though repairs were made to the ineligible portion to reduce infiltration to a level below the allowable limit actual pipelines may have been acceptable even prior to such repairs. When lateral sewers are built, house connections are placed and extended to the street curb line. They cannot be further extended to connect to the home plumbing system until all downstream treatment works are operable. In order to keep groundwater and soil out of these lines end caps are placed. As part of the recent inspection two caps at the end of house lines which the television inspection had revealed as leaking were inspected. They were found to be improperly placed. When they were placed properly the leak from these two connections in one case ceased completely and in the other was reduced to a trickle. There were 344 house connections tributary to I–9 during the weir reading (40 others were plugged). It is conceivable that many of these had leaking end caps and thus a significant amount of infiltration, possibly greater than the difference between the allowable infiltration and the initial amount, will be removed upon activation of the system.

VI. CONSTRUCTION COST CHANGES ON SOUTHWEST SEWER DISTRICT NO. 3

The costs presented in the 1969 Engineering Report were based on preliminary engineering planning without the benefit of detailed design analyses or plans and specifications. The estimated eligible project cost was $108,071,000 based on 1969 costs. The interceptors were planned for an ultimate saturation population equivalent of 555,056 in the year 2015 as estimated for Southwest Sewer District No. 3 and the NTA.

Cost figures for the interceptors were derived using prices paid by Nassau County for pipe and manholes. The sewage treatment plant was planned to treat an average flow of 30 mgd with 1985 as the design year. The estimate on the sewage treatment plant was made by Bowe, Walsh Associates, and the figure of one million dollars per million gallons treated was used. The ocean outfall was to be 1½ miles in length into the ocean and 66″ in diameter at a cost of $12,000,000. Costs for the outfall were derived with the aid of quotes from pipe manufacturers and contractors.

The original grant application was submitted to the NYSDEC in January 1970. This application showed almost a 50% increase in eligible costs up to $157,900,000. The cost increased nearly 50% on the interceptors because the popluation estimates were revised to consider future downzoning and a revised NTA. In addition,

field surveys conducted since the 1969 Engineering Report indicated that deeper sewers would also be required. The estimate for the sewage treatment plant increased by 25% based on the more detailed information being developed by Consoer Townsend Associates (CTA) during preparation of their basic data report for the plant. The estimate was for a 30 mgd plant with provisions for doubling the plant at some future time. Cost figures for the plant were based on similar plants in the New York metropolitan area. The cost for the outfall increased by 28% which was due in part to the new projected population.

In September 1970 a revised grant application was submitted to the NYSDEC. The new estimated eligible cost was $161,700,000. The new cost for interceptors was derived by subtracting the cost of two contracts (VI–7 and VII–7), which were ruled ineligible but which had been included in the original grant application. The estimate on the outfall doubled to $28,000,000, which brought its estimate more into line with Nassau County's pre-bid estimate on a similar project.

The total eligible cost for the project as noted in the 1971 grant offer was $210,900,000. The major increase in cost was due to a doubling in the cost estimate of the outfall. The revised estimate was made and substantiated by the opening of bids on the Nassau County outfall in October 1970. Only one bid had been received and it was 40% over the pre-bid estimate. The Nassau County outfall was 2½ miles and 84″ diameter. This gave Suffolk County a more realistic figure to use for estimating the cost of the outfall. During this period, the interceptor sewage treatment plant and pump station estimates were increased by 8%.

After the opening of bids for Contract I–9 (February 1972), the eligible cost of the project was estimated to be $280,000,000. This estimate reflected the following considerations:

1. An increase in construction costs of almost 30% due to inflation.
2. Completion of a basic design report by CTA for a 30 mgd sewage treatment plant with provision for expansion at a later date with some units sized for future use.
3. A doubling of the population projections to reflect the detailed analyses performed through industrial surveys, house counts, etc.
4. Receipt of bids on the County's first interceptor contract which resulted in better estimating abilities for future interceptors.
5. Completion of substantial work on the outfall design report which had already indicated a need for a 2½ mile length into the ocean and 72″ in diameter.
6. Receipt of bids in Nassau County indicating a much higher cost for outfall construction had already been taken into account in the 1971 estimates.

After the bids came in for the sewage treatment plant, the County estimate of eligible project costs was $307,600,000. The interceptors and the pump station rose by 11.5% keeping pace with the ENR cost index. The outfall cost decreased by less than 1% even though the length of the outfall was increased from 2½ miles to 3½ miles. However, the estimate was based on a thorough study of alternatives as reflected in the design phase project report. The low bid on the sewage treatment plant was 38% over the pre-bid estimate. Some of the reasons for the high bids were:

1. The prime interest rate had increased to 11.4%.
2. Contractors were facing delays in obtaining construction equipment and plant equipment.
3. Manufacturers were unwilling to provide firm estimating prices or delivery dates on equipment. Pricing was based on time of delivery and subject to escalation.
4. During the previous six months, cost increases of 50 to 100% had occurred in cement, reinforcing steel, stainless steel, cast iron and electric motors.
5. Fabrication costs for heat exchangers, reactors and furnaces increased by 50% in the previous six months and wet air oxidation units and incinerators increased from 30 to 50% in the same time period.
6. Steel prices had increased since the elimination of wage and price controls on May 1, 1974.
7. Labor contracts in the New York metropolitan area would expire half way through the sewage treatment plant construction and rumored demands were for a 30% increase in wage rates. This one factor could account for $5 million.
8. Workmen's Compensation rates may go up as much as 40% because of the exacting requirements of O.S.H.A.

The estimate to date has remained unchanged.

In summary, the estimated cost of the Southwest Sewer District project is considered reasonable and accurate. In addition the cost escalation experienced on the project since the 1969 Engineering Report cannot be considered as uncommon or the result of a "gold plated" design. Reasons for the above are:

1. The 1969 estimate was not escalated to reflect anticipated construction starts. Considering that 1978 will be the approximate midpoint of eligible construction, the 1969 estimate must be escalated to that date to properly reflect what the 1969 cost really meant in terms of projected cost. Based on the ENR cost index increase through the present time and projecting a 5% annual increase through 1978, the 1969 estimate of eligible costs escalated to 1978 would be approximately $213 million. The County, of course, did not have the advantage of knowing in advance that cost increases of 10–15% would be experienced in the 1070's. However, they should have certainly realized that their 1969 estimate was low, since it had not been escalated.

2. The 1969 estimate was based only on preliminary planning and could not, therefore, reflect accurate pipe lengths, trench depths, pipe sizes, outfall length, treatment plant unit sizing, populations, etc. While it may be desirable to present more accurate cost to a referendum, the New York State Department of Audit and Control insists on formation of a legal district as soon as possible so that the benefitted properties and not all residents of the County are charged the cost of the project.

3. The outfall cost has increased more than fivefold to its present estimate. In 1969 there was no comparative outfall where construction costs were known so that the County could have a comparison cost. When Nassau County bid its outfall, this necessary comparative cost was established.

4. The detailed development of population projections through use of densities, surveys, etc., showed that the previous population curves utilized were not accurate or were not a basis that could be used for design purposes. The resulting increase in the population projection resulted in larger interceptor sewers being required.

5. The current estimates have been substantiated by independent estimates prepared by construction contractors working in the County and by Price-Waterhouse who had been hired by the County Legislature to verify estimates.

6. The bids received have substantiated the County's estimates for interceptors.

7. The only remaining unfirm cost is the outfall. The restrictions on construction placed by EPA to mitigate environmental damage are certain to have an effect on the cost, which, however, it is nearly impossible to calculate.

VII. PROJECT INSPECTIONS

Southwest Sewer District, Project No. C–36–624 consists of: four construction contracts for the wastewater treatment plant, two contracts for the outfall sewer, four contracts on a pumping station and 15 contracts for the interceptors. To date, the four contracts for the treatment plant and five interceptor contracts have been under construction. Prior to March 1, 1975 the only contract under construction was I–9. A summary of the inspections to date follows:

Contract	Joint inspection	NYSDEC alone	USEPA alone	Total
STP	4	1	0	5
I–7	1	0	1	2
II–10AR	2	0	0	2
III–8	2	0	1	3
I–9	0	3	0	3
II–8A	1	1	0	2
Total				17

Many more than 17 inspections will be conducted since the project is only 12% complete.

The regulations for P.L. 84–660 state, "The applicant will provide and maintain competent and adequate engineering supervision and inspection of the project to insure that construction conforms with the approved plans and specifications." Prior to giving permission to award a construction contract EPA has on each con-

tract received assurance from Suffolk County that this requirement will be complied with. The regulations further state that, "An inspection will be made after completion of construction and prior to release of final payment. Other inspections may be made during construction on a drop-in basis or may be scheduled on a geographical basis." In an effort to increase the Region's inspection capabilities, we are currently negotiating contractual arrangements with the Corps of Engineers and the General Services Administration in the amount of $230,000 for use of their personnel to supplement the Region's own forces.

It is the opinion of the Region that, considering staffing limitations of both the NYSDEC and EPA and the goal of avoiding unnecessary duplicity of effort, the inspection program has been in accordance with national policy.

VIII. PROJECT AUDITS

The EPA has not to date performed a financial audit on the project.

It is Agency policy that interim audits should only be performed, except in special cases, on projects on which EPA has paid more than 25% but less than 80% of the Federal grant entitlement (current grant payments amount to 12.4% of the total grant).

IX. ENGINEERING FEES

There are four contracts for engineering services executed by Southwest Sewer District No. 3 on the work currently funded. They are:

1. Contract for intercepting sewers with Bowe, Walsh and Associates, dated September 18, 1970.
2. Contract for Water Pollution Control Plant with Consoer, Townsend and Associates, dated September 18, 1970.
3. Contract for Main Interceptor, Pumping Station(s), and Force Main(s) with Havens and Emerson, dated September 18, 1970.
4. Contract for Outfall Sewer with Bowe, Walsh and Associates, dated April 6, 1971.

The basic contract used for all four is identical and indicates that the Southwest Sewer District No. 3 used a standard contract for all engineering services. The contract consists of 15 articles which are standard in every case and cover general conditions. Attached and made part of each contract are two schedules, A and B. Schedule A provides a description of the scope of work. Schedule B contains additional general provisions. In the first three contracts Schedule B contained seven items. In the outfall contract, Schedule B contains 17 items and an additional Schedule C with further general provisions has been added. The additional provisions in the outfall contract provide the Sewer District with some additional protection.

The form of the four contracts corresponds to the "Percentage of Construction Cost" type agreement described in the American Society of Civil Engineers (ASCE) Manual of Practice No. 45, "Consulting Engineering, A Guide for the Engagement of Engineering Services", 1968 (ASCE Manual 45). The fee curves contained in the ASCE Manual 45 were included in each contract.

ASCE Manual 45 describes two types of services to be provided in design type projects. Basic services include a preliminary phase, a design phase and a construction phase. Special services involve studies "outside the scope of the basic design services of the Consulting Engineer". The scope of work for each of the four contracts contained in Schedule A is divided into basic services including preliminary, design and construction phases and special services.

Compensation for basic services of these contracts is based on a percentage of the construction cost. The percentage used is contained on curves in ASCE Manual 45. The contracts for outfall sewer, for water pollution control plant and for the pump station and force main use Curve A—"Median Compensation for Basic Services Expressed as a Percentage of Construction Cost for Projects of Above-Average Complexity". The contract for intercepting sewers uses Curve A for all sewers less than 24" in diameter. Curve B—"Median Compensation for Basic Services Expressed as a Percentage of Construction Cost for Projects of Average Complexity" was to be used for other sewers.

Compensation for special services is based on salary cost times a multiplier of two plus expenses for work performed by the engineer except where a partner may be involved where a per diem charge of $200 a day is used. For special services of outside consultants the charge would be 1.1 times the billing amount (the 10% surcharge is for administrative expenses).

It should be noted that the ASCE fee curves have been revised upward since these agreements were entered into.

As part of our review we have compared these engineering contracts with contracts for similar work entered into by three other municipalities. The comparison revealed that:

> The general provisions contained in the Suffolk County contracts appear to cover more responsibilities and to cover items in a more detailed manner than any of the other contracts.
>
> The specific contract provisions for all contracts contain many of the general provisions listed under basic services in ASCE Manual 45. The Suffolk County contracts contain more provisions in more detail than the other three.

All three contracts are similar in compensation to the Suffolk County contracts. They provide for a fee for basic services based on ASCE Manual 45 and also provide for payment for special services. In all three contracts a specific percentage fee is designated rather than inclusion of the ASCE curves. Two of the contracts provide for some adjustment of the percentage based on the final construction costs. The percentage fees for two are similar in range to Suffolk, the other appears slightly higher. Finally, when comparing contracts for work performed in Suffolk County, it is unfair to make such comparison without considering the extent of the pre-design work performed by the owner and supplied the engineer. Extent of such information supplied in Nassau County and in New York City is substantially different from that supplied in Suffolk County where there was, due to the inexperience of the sewer agency, a lack of such information.

In summary, while the review of engineering fees paid and billed the government will not be completed until final audit is performed after project completion, a review of the contractual agreements has revealed such agreements to be proper and to compare favorably with similar agreements entered into by other municipalities during the same time period.

Mr. AMBRO. If you will then, Mr. Hansler, continue with your statement.

Mr. HANSLER. It is 29 pages long and it touches on the issues raised by public inquiry, press inquiry, and especially inquries from the subcommittee staff, Mr. Kopecky, Mr. Prolman. They have been fair, very fair, in airing all the issues and the rationale as to the development of this project.

Our 29 page statement covers consulting engineers' fees, are they high, are they low, are they legal, under what law did we operate. It covers construction of the project to date, the eligible portion in the Federal project. This is about 12½ to 14 percent completed.

We have made 17 inspections so far on the project, EPA inspections. It is 12½ percent completed.

Mr. AMBRO. When did you make the inspection?

Mr. HANSLER. Over what period of time?

Mr. CASPE. Well, after December 1975, which was our first inspection, we have made several additional inspections. Since the investigation started we have been out there a number of times.

Mr. AMBRO. I heard you, but it was difficult.

I think what you said was since December of 1975, since these investigations started, you have made 17 inspections. But, of course, what conjures up immediately is whether prior to that you made none. What was the percentage of completion of the project prior to that? Maybe that will put it in a better perspective.

Mr. CASPE. Yes. Well, December 1975 was our first project inspection, which was prior to the investigations really starting up. That was made when the treatment plant had been under construction for a short period of time.

Prior to that, there was only one contract under construction. That was contract 1–9, referred to as I–9 here, which has been completed and had been inspected by the State twice, but it had never been inspected—well, I had been out there on a complaint type inspection

but never on an actual compliance with construction requirements inspection. Since the investigation was started in the latter months after December 1975, we and the State have been out there on a number of inspections.

Mr. AMBRO. I–9 was the subject of severe controversy because it had failed many times. Then you finally passed it. What happened with I–9?

Were there many corrections made in the engineering level to move it from failure to passable?

Mr. CASPE. Well, I–9 was first completed in 1974, I guess; 1973, when it was tested for the first time for infiltration. It failed a number of times. Corrections were made until it did pass the infiltration test. There were no other major problems really known at the time, I do not believe.

The county had in their contract specifications the option of going back 2 years later to reinspect at the end of 2 years, prior to release of their final retainage of moneys. They went back after 2 years, again it was tested for infiltration. It failed the test.

It was retested a number of times with corrections being made and was finally passed based upon 200 gallons per inch per mile per day rather than the specified 150. Since that time with all the allegations coming up we did go out, as the State mentioned, and we required that the line be dewatered, retested, for infiltration, and a complete videotape made for our surveillance of the interior of the entire eligible pipeline.

Mr. AMBRO. Was it ever paid for?

Mr. CASPE. Excuse me?

Mr. AMBRO. Was it paid for?

Mr. CASPE. Was the Federal money expended on the contract?

Mr. AMBRO. Any money. Was I–9 paid for?

Mr. CASPE. Well, the county has accepted it and it was completely paid for.

Mr. AMBRO. When was it completely paid for?

Mr. CASPE. After the 2-year test. It would be 1975.

Mr. AMBRO. When in 1975? Prior to your inspection?

Mr. CASPE. Oh, yes; by the county, yes.

Mr. AMBRO. Prior to your inspection, but after it passed?

Mr. CASPE. That is correct.

Mr. AMBRO. Was there a portion of I–9 paid during the construction phase? Was it an ongoing type thing?

Mr. CASPE. I–9 was paid, I presume, the way all contracts are paid on a buildings basis. As constructed, they pay on work done, work completed, as accepted by the engineer.

Mr. AMBRO. And the engineer, prior to final passage, approved payment after inspection of I–9 during various phases of construction; is that correct?

Mr. CASPE. That is correct.

Mr. AMBRO. Well, are we suggesting that the engineer who is approving is in various phases of construction with that which continued to fail tests, but ultimately passed?

Mr. CASPE. No. Well, there was retainage held. The retainage, I believe, varies on this contract between 2½ and 5 percent up until the end of the 2 years. The retainage was deemed as sufficient to cover the extent of any repairs that would be required.

Mr. AMBRO. If there were not criticism of I–9 or complaints, would you have gone in there and inspected?

Mr. CASPE. We would have as part of the final inspection of the entire project. We would not have crawled through lines, necessarily, but we would have when it was in operation opened up manholes, looked down, although you might look in, go down, and you are not going to be able to crawl through the lines, obviously, and TV them.

You can tell the way the flow is running in those lines whether they are proper or improper.

Mr. AMBRO. You heard a great deal of the testimony with respect to audit or absence of it. You have an oversight responsibility to EPA. I know about your capability with respect to an audit. Do you want to comment on that?

Mr. HANSLER. Yes; I do.

Mr. AMBRO. The personnel and the number of projects you have in the United States.

Mr. HANSLER. Yes; I do.

I will preface it by saying that this is an old law project and under the old law we did business under the regulations applicable and that is to rely upon the applicant and whoever he hires, a consulting engineer or a separate engineer, or if he uses his own resurces, to perform the inspection.

We do not have the Federal resources nor does the State have the resources to provide an onsite inspector.

Mr. AMBRO. This is a glaring gap in our oversight responsibility.

Mr. HANSLER. I do not think it is a glaring gap. I think there is a gap.

Mr. AMBRO. With respect to the $18 billion program, for example.

Mr. HANSLER. I think it is a gap on any large project.

I believe that we should have the Federal resources to provide a resident inspector on major projects. We do not.

Mr. AMBRO. Why not?

Mr. HANSLER. We do not because we have not received the positions through the process of the agency, OMB and Congress.

It is that simple.

Administrator Train has testified before the Public Works Committee that we do not have enough people.

We do not need a Federal army, but we do need additional persons to better assure that these projects are properly constructed.

I would say that we probably lucked out on Suffolk.

The first one built was I–9. I–9 passes the test.

The infiltration inflow test required by the county was more stringent than New York State or the 10-State standard.

When the project was awarded, the 10-State standard was 500 gallons per day based upon length of pipe and diameter.

The Suffolk County standard was very stringent, 150 gallons per day on the same parameters.

I–9, the one in question, passed that test.

As testified to today by other people, not the State or EPA, but local citizens, the construction on subsequent sewers in southwest Suffolk has vastly improved.

I think you are then getting a good type project.

Mr. AMBRO. What motivated you on March 1, or your agency, to prohibit engineering contracts which base fees on a percentage of construction costs?

What brought that about?

Mr. HANSLER. It was the agency's concern, some of us within the agency, and it was GAO's concern that we did not want to tolerate excess profits on the part of anybody, be it attorney working on development of a sewer project, a consulting engineer designing or a contractor, through any type of collusion or otherwise.

Mr. AMBRO. How would those contracts generate excess profits?

Mr. HANSLER. The contracts for the consulting engineer here?

Mr. AMBRO. No.

The ones you prohibited generally which might include the ones here.

Mr. HANSLER. The regulation that took effect this March, in answer to a question posed by someone else earlier this morning, does not apply to the southwest Suffolk Sewer District No. 3.

The engineering fee procedure or the assessment of engineering fees was based upon the old law and practices back in 1971.

I probably would not have answered the question the same as County Executive Klein, as to whether these engineering fees are excessive.

He did properly indicate they were based on the old law and old practice.

We have done an analysis. We have looked at Buffalo, other municipalities, and in the period of 1970 to 1972 that was engineering practice.

We saw this as a loophole in getting the best buy for the State, Federal and local dollar, but today the engineering contracts are much tighter.

It is true that a consultant may design a big piece of equipment, like a waste treatment plant, and it may sit on the shelf for 3 years. It finally goes to bid.

Because of inflation and cost of money, and so forth, labor costs, it goes up 40 percent.

Why should the consulting engineer get an additional 40 percent? He has already expended his resources to design the project.

The regulation we have on the book now precludes that. We have been effectively monitoring it on new law projects. Legally, there is nothing we do insofar as old law projects.

Mr. AMBRO. As costs increase, for whatever reason, are you suggesting that the engineering fees are based on a percentage of that increase, too?

Mr. HANSLER. Yes.

Mr. AMBRO. That might be an incentive then for any engineering firm with that kind of a contract to be most enthusiastic about increased costs.

Mr. HANSLER. I am a registered engineer, although I do not consult.

If I was a consulting engineer, I would agree with Congressman Wright, there is a profit motive. I would want to get all I could.

But, I am on the other side of the fence and as an agency we have tried to plug that gap on excess profits.

Mr. AMBRO. Just tell me, then, at that point, what procedures will apply for the new segments now being considered by the EPA?

Mr. HANSLER. The procedures that were on the books on March 17 of this year were that we review the engineering contracts and if we feel they are excessive, we back off both the applicant, that is, Suffolk County, and the consulting engineer.

We have done this on some major projects.

On one project the fee was supposed to be $5 million for engineering. We backed them off a full $2 million.

Mr. AMBRO. How do you back them off?

Mr. HANSLER. Mr. Luoma?

Mr. LUOMA. What Jerry was referring to was our review of a grant application and under the new regulations as we were reviewing the engineering fees, comparing them to the ASCE manual curves, comparing them with projects of a similar type, it was our determination that the fees were too high.

One of the reasons that it happens, as Jerry mentioned before, the project is designed, the work is completed. It does not go under construction for a number of years.

As that period has escalation in it, the cost of the construction goes up on a percentage basis and the engineering fees go up.

Now, we are reviewing those.

Mr. AMBRO. Why did it take so long for EPA to determine these kinds of contracts were less than in the public interest?

Is it because you are a new agency or relatively new?

Mr. HANSLER. Probably because it was a new and complex law.

Our regulations went out as an agency a considerable time after October 18, 1972.

We had many new requirements.

We had infiltration, inflow, historical, NEPA, archeological, industrial cost recovery, user charge, and it was very complex.

I am defending EPA and headquarters in their rulemaking process.

It was very complex to get regulations out.

We were not required by Congress to look at the level of engineering fees. We did this on our own. We did it outside of a congressional mandate. We did it because we saw it as a gap.

Mr. AMBRO. Who was required to do it?

Mr. HANSLER. No one.

Mr. AMBRO. No one?

Mr. HANSLER. No one.

Mr. AMBRO. Are you satisfied now that you have through your regulations sufficient authority to, as you put it, back them off?

Mr. HANSLER. Yes; and we have practiced that.

Mr. AMBRO. Has it been attacked in any way through the courts?

Has there been resistance anywhere to your authority?

Mr. HANSLER. There has been considerable discussion within the civil engineering profession and basically we probably bullied them into acquiescing in this procedure.

We said it was in the public interest and we do not want our projects to be ripped off.

It is in effect and we are practicing it.

Mr. AMBRO. You now prohibit multiplier profits where profit is part of the multiplier.

What does that mean in English?

Mr. HANSLER. Dave?

Mr. LUOMA. That means we can have personnel service contracts with a multiplier to take care of overhead and expenses, but that the profit and the overhead be identified separately and be fixed.

We all know what we are negotiating for on the multiplier.

Mr. AMBRO. Did you hear the testimony of Mr. Mrazek?

Mr. LUOMA. Yes; I did.

Mr. AMBRO. He said in counties where negotiating was more stringent, they have a multiplier of 2.2 I think he said.

The multiplier here is 2.

Why is, therefore, this contract less beneficial to the public interest than that which is 2.2?

Mr. LUOMA. I think the point he was making, if I am not mistaken, was that the fringe benefits were added onto the payroll costs before the multiplier was applied.

This is a controversy that we have had in EPA.

A number of accountants feel that the multiplier should only be applied to the payroll cost directly.

Mr. AMBRO. Do you have a regulation covering that now?

Mr. LUOMA. Yes. The new regulations do cover that now.

Mr. AMBRO. So, you address that already; is that right?

Mr. LUOMA. It is not on this particular project, however. This project is under the old law.

Mr. HANSLER. There is one other important part on the consulting fee business that would tend to escalate costs.

If you run a sewer in piedmont, you do not have a sand or water problem. If you run a sewer here, your construction costs may be more than the actual design effort on a proportion basis.

Similarly, when you get into areas of rock excavation, it is easy to design a sewer through that, but it is very costly to construct.

You have to dynamite in that case. If the engineering contract is on a percentage of a construction contract, such as 5 percent, we feel that that may cause excess windfall profits and that the consultant really has not expended that much effort to warrant 5 percent of the construction contract.

So, we are trying to look at every aspect of an engineering service and make sure it is fair.

Mr. AMBRO. I do not want to get into this with you, Mr. Hansler, because I think we will take it up with Mr. Train, but it is just my impression from looking over the EPA budgets that the Congress was amenable to the recommendation by the Administrator that moneys be installed in that budget for a kind of inspection necessary for these projects, but the culprit, if you will, here was OMB.

I do not want you to comment on that, knowing the sensitivity of that arm of the executive branch, the Office of Management and Budget.

But, I will just say that for the record and leave it dangling.

Well, you know, we can talk for an awful long time about all of this; contracts, bonds, audits, and what have you, fees.

I wonder if maybe as a last segment to all of this you would in some way sum up your views of the comments made about the environmental and ecological impact as a result of the Southwest Sewer District, the outfall pipe and secondary treatment and in some way comment on those adverse criticisms?

Mr. HANSLER. I would like to comment on those first, and I would like to, if I may, react to a few statements made earlier by diverse groups.

Many of the statements I concur with. Some I do not. Again, this was a 1971 project. The State did not have the Wetlands Act.

EPA and other Federal agencies were not paying as much attention to environmental impacts as we are today. NEPA was a relatively new thing. CEQ was still fumbling with regulations.

The grant was given in 1971. In 1972, we prepared an environmental impact statement not only for southwest Suffolk, but every project on Long Island since 1956, to address these issues; shellfish, ground water supply, recharge.

We went to citizens' briefings on Long Island before we held our public hearings. We held public hearings with the State.

A final form was submitted to CEQ. There was no complaint within 30 or 90 days. It was an accepted environmental impact statement.

Two years later we were sued again by the Environmental Defense Fund.

We raised these issues.

EPA, for the past 2, 2½ years, has done everything under our power, whether it was in the State domain or other Federal agency domain, to make this an environmentally sounder project.

There have been quite a few changes made to the project because of our efforts.

One was the outfall, which is now hungup.

We talk about delays in construction. We talk about interest rates.

We talk about inflation.

A lot of this public information has caused the cost escalation and the delays.

So far as the outfall, the State has said it will not violate ocean water quality standards.

EPA has said this.

Insofar as how the outfall is constructed the environmental issue was brought up by Mr. Tripp and others.

Litigating actions are being taken to minimize temporary adverse environmental impact and precludes long-term impact.

First, insofar as nesting, we went to the ornithologist at the Museum of Natural History in New York to find out how to best handle this.

It was factored into the project.

Second, on the wetland grasses, one person testified that we have to protect our wetland grasses. In fact, we should improve them with the project.

We have obtained the concurrence of Suffolk County to have a separate contract for the restoration of wetland grasses based upon latest technology, which was a Corps of Engineers demonstration project down in Maryland or Delaware.

It will be the best in the country.

We hope it works.

Insofar as laying the pipe across the Great South Bay, we require that the shellfish within the area be removed.

When the pipe is in, we will bring them back.

I think the engineer from west Islip testified that they have a shellfish propagation program and shellfish can be reseeded.

Mr. AMBRO. It was Mr. Andres.

Mr. HANSLER. Right. Mr. Andres.

We have limitations on the siltation during construction of the outfall line. Again, limitation on the dredging operation, filling operation, is more stringent than in any other project.

Undoubtedly there will be some short-term temporary impact, but we mitigated it.

Mr. AMBRO. Do you have any concern, as many people did, about the salinity affecting the shellfish industry as a result of this?

Mr. HANSLER. Yes.

I am getting to that with recharge.

On the recharge issue, in Region 2 we moved ahead with Nassau County as a consequence of our environmental impact statement in 1972, with a feasibility study on tertiary treatment on recharge.

The feasibility study was completed.

It showed promise. It showed a lot of promise.

We gave a grant for plans and specifications in construction. That project should be underway within 3 months and completed within 2 years.

I am more hopeful that the technology will be on the books for recharge insofar as applications in Suffolk County or the coastal area of New Jersey well before 5 years.

Mr. AMBRO. That is the Cedar Creek project?

Mr. HANSLER. Yes.

At the same time we have sought R. & D. funds from EPA headquarters and retained them.

Mr. AMBRO. Are you absolutely convinced, just sticking with Cedar Creek, that the demonstration project that is underway there can be easily applicable to a system of this size, 6 times almost the size of that one both in terms of design, cost, technology?

Mr. HANSLER. I would say yes.

In fact, I would say we were probably going to have breakthroughs.

They are looking at another technology also in construction with Cedar Creek that will be probably less expensive and might do more.

The first one is always the most expensive.

I think it will be applicable.

I do not think you would ever recharge all of your 30 million gallons a day.

I think you are going to have ground water flooding conditions if you do. You have it right now in the coastal areas there.

I think it is going to take that part of the waste that you need, give it a tertiary treatment and recharge it for the sake of your aquifer.

Mr. AMBRO. Why would you have ground water flooding?

Mr. HANSLER. If you have periods of high rainfall.

Mr. AMBRO. Why could you not pipe the recharged water into an area of, let us say, the major aquifer dome in another part of the island?

You would not have to put it right in the ground next to the tertiary plant; would you?

Mr. HANSLER. No.

We do not intend to.

Mr. AMBRO. Then that concern could be obviated; could it not?

Mr. HANSLER. Not necessarily.

You can still go back into an area. However, when you have a lot of rainfall any other waste water effluent you put in will create a flooding condition.

Insofar as the salinity issue, I am looking at the same treatment plants. I am looking at the red dot. What do you do with the waste water?

You have retreated it to 90-percent removal right now. It is pretty good water.

You cannot discharge it to the shellfish beds, but we believe that the law will allow right now without amendment to pipe that back and augment the flow in the Carlls River, and in the other streams, so you have a fresh water, not a chloride, coming into the Great South Bay.

We believe it is eligible and we are working with Koppelman now and the State and the people that are concerned, because, in essence, it is an outfall that you can use.

Mr. AMBRO. Under the Water Resources Act?

Mr. HANSLER. Under 92–500.

Not the River and Harbors Act. Under 92–500.

We often change, throughout our region, where the outfall pipe goes from a treatment plant.

If you have one opportunity to go in a little creek and the creek can take it versus a big river, we put it there.

However, if you need fresh water in that creek and right now you have urban runoff and you have bad conditions, you can actually have an improvement in water quality and improvement in the Great South Bay.

Mr. AMBRO. It is eligible for what percentage of the project cost?

Mr. HANSLER. Seventy-five percent.

Mr. AMBRO. That is another 25 percent where? The State?

Mr. HANSLER. Local percent is 12½ percent, 12½ percent State.

Mr. AMBRO. Local percent is 12½.

Do you have any ballpark estimate as to what that might be?

Mr. HANSLER. I can make a ballpark estimate and be corrected by my engineer, so I will ask them.

Mr. SALKIE. The best estimate we have is approximately $6 million for installing a force main in the same trench as the interceptors, but this was for a larger pipe.

We are talking now about a smaller scale project simply designed for augmentation.

We would have to reduce the estimate ballpark figure in the area of $4 million to $5 million.

That is right off the top of my head.

Mr. HANSLER. So, you are talking about $1 million.

Mr. AMBRO. That is another $500,000 to the district.

Mr. HANSLER. You are talking about $500,000 to the district for shellfish out there that they say is worth $80 million or $100 million.

You are also talking about the speculation of the salinity and it is speculation.

Your salinity would drop and be disastrous.

Even if you had the pipe going back inland, like to the headwaters of the Carll's River, and the head of two other streams from that point, if you ever wanted to put in your tertiary plant or ground water recharge, then you already have your pipe in.

Mr. AMBRO. Let me ask you a question about the technology involved in the Cedar Creek plant.

How is that being done?

With a consulting engineer?

Mr. CASPE. Yes.

It is being done by the same engineer that designed the Fleet's Point, Suffolk County, plant.

Mr. AMBRO. Who do they look to or where do they look for plans and specifications for this kind of a project?

Mr. HANSLER. They research the literature. They talk to professors.

They talk to the EPA people that have worked on advance waste treatment.

Mr. AMBRO. Any places in the United States or in the world where you have recharge of tertiary treatment for this size plant?

Mr. HANSLER. This will be the first and the biggest in the country.

Mr. AMBRO. In the world?

Mr. HANSLER. In the country.

Mr. AMBRO. How about Europe?

Mr. CASPE. I have heard something about there being something in Germany, but I do not know much about it.

Mr. HANSLER. We have a system down in the Virgin Islands that was established before we had EPA where they were recharging an aquifer. They have to barge their water in. It is not nearly as sophisticated as this.

I think they will probably have problems because of the salinity of mixed wastes, of salt water for toilets and fresh water for drinking and cleaning purposes.

This is a relatively clean project. They have good quality water to begin with.

They end up with 85 or 90 percent treatment before it goes tertiary.

When it finishes with tertiary, I certainly would drink it, even before it goes into the ground water.

I have that kind of faith in it.

Mr. AMBRO. There is no question that European technology in many areas is shockingly far ahead of ours.

For example, with respect to solid waste disposal and the kinds of high temperature incinerators generating power that they have and we do not, and we are just getting into.

Even Montreal is far ahead of us with respect to that.

Maybe somebody should go to Germany and see what they have.

You know, I think it might not be a bad idea to go over there and see what they have and plagiarize it and have something which indeed is working.

I have not been over there to see it, but I think it is incumbent upon you.

Mr. HANSLER. I think we should go over there in October.

Mr. AMBRO. I was thinking about November 3.

I am sorry about that.

I really think it has nothing to do with you in your segment of the agency, but EPA is remiss in developing the kinds of technology in a host of areas that would be beneficial to the myriad municipalities in the United States on which revolve the function of solid waste disposal, sewage waste disposal, and the like.

They do not have the resources. They do not have the personnel. They do not have the talent.

No matter how many people scream in Washington, there is still an ongoing resistance by EPA.

In any event, with regard to this Cedar Creek plant, we have high hopes, for somebody is reading the literature to develop a technology.

Your costs at the moment are estimated as $24 million with a total eligible cost of $32 million.

Probably in 3 years it will go up to $3.3 billion.

We hope that it works, but it seems to me we can all put things together a lot better.

I was not kidding about going to Germany.

Mr. HANSLER. A lot of people would like to get me out of New York.

I would like to talk about the Cedar Creek thing. I do not know if it is going to be $3 billion.

A lot of the money on this project is because of the different methods of application.

A surface lake for percolation, fairly shallow wells for percolation, deep water recharge, it has to come up with a range of answers.

Mr. AMBRO. How about nitrate?

Mr. HANSLER. It does include nitrate removal.

That was the first thing you begin with because of the Long Island and Jersey coastal situation.

Mr. AMBRO. How do they anticipate doing that?

Mr. MOLINERI. Biological nitrification, followed by advance waste treatment consisting of physical chemical treatment, filtration, activated carbon treatment and disinfection.

Mr. AMBRO. They are expensive technologies used in terms of physical facilities.

Is that what you anticipate?

Mr. MOLINERI. The biological portion of the treatment plants are larger than the conventional treatment plants, but activated carbon units are smaller than what your conventional treatment units are.

Mr. AMBRO. How about energy costs?

Have you figured that out?

Mr. MOLINERI. Energy costs are high.

Mr. AMBRO. High?

Mr. MOLINERI. Yes.

This is part of the demonstration project, too; to evaluate the operation and maintenance of this plant.

Mr. HANSLER. Nassau is going to an energy utilization program where they will get a benefit from their garbage and their sludge. They are doing that. They are under contract now.

I think they are only putting up $3 million of county money and it is an $82 million project.

They are getting industry financing because of the technology that has been developed around.

Mr. AMBRO. Did you hear the question I asked Mr. Flynn, who is the Environmental Director in Suffolk County, with respect to this project?

I will repeat it anyway.

I asked him if he thought that the project with respect to the present design, its outfall pipe, its secondary treatment, is a project that is not in need of any change and we do not have to shift to recharge.

He said, yes.

Do you agree with that?

Mr. HANSLER. I do not think you have to change anything that has been designed at this point in time, including the treatment plant.

I think the project does merit continued, you might say, overview insofar as the augmentation aspect and insofar as the recharge aspect as that is defined, and I am confident it is going to be well-defined, under the present 208 plan which is underway in Suffolk County, and required by law.

I would not want to say junk the project now.

I think that is the most foolhardy thing financially that the people of Suffolk County could do.

It is no skin off the nose of the Federal Government. If the project was stopped right now, under the law we would have to not only terminate our funding, but receive back Federal funds because the project has been stopped.

When the figures were thrown around by various people as to what it is going to cost the taxpayer, I agreed with every citizen here.

I do not think that the local government has shown the price tag fairly to the local voter and taxpayer. I think the $1.5 billion sign or $1.4 billion sign is grossly inflated.

I think that because they are using the 38.9 present Federal share.

On October 15 that goes up because Congress has appropriated more money for reimbursement to about 78 cents on the dollar instead of 64 cents on the dollar.

I think when Congress fully appropriates the reimbursement amount that was promised back in 1966 they will have the full 55 percent.

Also, collection systems which were not eligible and not initially planned for are on the present EPA approved priority list, which will give another $110 million in Federal funding.

Before it was zero.

Plus, another 12½ percent of State funding.

When you begin calculating down the $600 per year for the 83,000 families over a 35-year period, looking at what the law right now does provide for and will provide for, I think when Congress appropriates fully the reimbursement you are probably talking more like $200 to the household.

Now, if we look at the cost of the overall project and add $200 or $250 per year per household, over half of it is in the sewer system.

In many areas of the United States people have had their sewers for 100 years, 50 years.

Suffolk, for the first time, is putting in a sewer. It is putting in a sewer from scratch on today's dollar, which is probably worth one-tenth of what the dollar was in 1900.

I still think they are getting a bargain.

Mr. AMBRO. Now, listen.

I want to pin this down because an awful lot of people around here are very interested.

I think you used the word twice that the appropriations were made to fulfill the authorization under the law raising the reimbursement from 55 to 75 percent.

Is that what you said?

Mr. HANSLER. No.

What I am saying is this is an old law project and the maximum grant the Federal Government could give was 55 percent.

The actual grant was much less than that because the promise on the part of the Federal Government was to pay in the future if the community financed the Federal share locally.

Our original grant was what percent?

It was 4.7 percent to Suffolk.

That is all we could grant them because that was all the money appropriated.

It then rose to 5.2 percent.

It is now up to 38.9 percent.

On about October 15 or before the first of November they will get another check and a grant increase which will bring it from a 38.9 percent Federal share up to somewhere between that and 55 percent, probably up around 48 or 49 percent.

Mr. AMBRO. But, they budget the 55 percent.

Costs are coming in already. You are not giving them anything additional.

Mr. HANSLER. They do not have the cash.

Mr. AMBRO. I thought what you were talking about was their hope under Public Law 92–500, that that share would go from 55 to 75.

Mr. HANSLER. It will under the Grover amendment if Congress appropriates the money.

Mr. AMBRO. This is the point I am making.

It has not appropriated the money?

Mr. HANSLER. That is right, and it has not appropriated the money to go to 55 percent all the way, as yet.

Mr. AMBRO. Okay.

Look. Let us just get it straight once more.

The 55 percent is budgeted in Suffolk County.

The hope for an additional 20 percent is not.

Is that correct?

Mr. HANSLER. We could not glean that from Mr. Mrazek. He said he does not have all the figures upon which to make an analysis.

Mr. AMBRO. Well, it is my view that the financing plan includes a 55 percent grant.

That is the latest figures I have.

Is that 67 percent of the 55 percent that has been paid?

Mr. HANSLER. Right.

Mr. AMBRO. But, the plan includes the 55 percent?

Mr. CARNEY. No. No.

Mr. AMBRO. Who is responding back there?

Who are you?

Mr. CARNEY. I am Legislator Carney.

I am on the environmental control committee.

They only allowed us to use 38.9.

Mr. AMBRO. And your financial plan does not include the 55 percent grant that is already authorized?

Mr. CARNEY. That is correct, sir.

Mr. AMBRO. OK.

So, what you are suggesting here then is that in the first place if we can get appropriations to bring up the contributions on the Federal level, to 55 percent, that will diminish——

Mr. HANSLER. That is right.

That will diminish the cost per homeowner.

Mr. AMBRO. Well, yes, but all the interest costs will still be the local share; is that correct?

Mr. HANSLER. That is right.

On that point I testified before a couple of other committees.

We certainly support in this region a program where the municipalities are not ripped off with high interest rates.

When Buffalo is paying 10.9 percent for their paper, as one person said, that is obscene, and when you find that 60 percent of your resulting costs to your homeowner are in interest, they cannot afford it.

Those are the financial issues.

I would like to talk about another environmental issue in the project design and how we have not had the benefit of newer technology with this project.

The sludge disposal facilities here are, I think, in a wet burning process called zimpro followed by incineration.

It is very expensive equipment. It is much more expensive than dumping in the ocean. It is probably much more expensive than the composting process which has been proven not only technologically and from an environmental standpoint, but from an economical standpoint.

It is difficult in knowing how you did business with consulting engineers or how you did business back in the sixties or seventies, to swallow the fact that we probably spent more money on the sludge disposal process now than had we waited 5 years.

On the other hand, when I look at the alternative of your home pesticides, your silver polish and everything else, going directly in your ground water table, 30 million gallons a day, I come to the same conclusion that the State health authorities, the local health authorities, the county department of environmental control, have come to; that you need a sewer system.

You need a sewer system in this highly congested area.

I have never been in an area in the country where you have a town such as in the village of Farmingdale with laundries and restaurants and little industries and when I said where does the sewage go they said it falls in the ground water table.

Mr. AMBRO. You asked these questions of these people? You do not have any jurisdiction in that area; do you?

Mr. HANSLER. No. I do not.

It is a State and local health agency decision.

But, when I hear people today testifying that there are home package plants to put in, secondary treatment, then I look at all the facilities in those old towns and the engineering cost per person to put in a secondary treatment plant, and I think, where would you put it?

How would you put it in the basement of your building?

It is amazing.

Maybe you can do this out in the periphery of the county and should do it, but when you are talking about the older developed areas, here in the Southwest, I think from a health standpoint you have to move ahead.

I think from a physical standpoint they have to move ahead.

I do not think that the physical picture is as bleak as has been painted by the people who want to stop the project.

It was interesting to hear the person from EDF when the question was posed by Congressman Wright, "Then you want to stop the project because you want to stop growth," and he said, "Yes."

Mr. AMBRO. I do not admit that he said it that way because I have lived around here a long time and can relate comprehensive plans, land use plans, zoning practices, growth, and intensification of pollution. There is no question there are opposing philosophical, if you will, points of view with respect to limited growth on a fragile island like this, on the one hand, and those who would say, you know, land use practices should permit anything for a whole host of reasons.

There is a definite interface between those who suggest limited growth policies within the framework of, let us say, an interdisciplinary comprehensive plan underpinned with environmental considerations, which we do not have.

What we have here is a traditional conventional area which is a lithographer's delight with red and yellow and orange colors on a map where they say we put commercial here and residential here and so forth.

That does not talk to the fact that the water supply is the most precious resource on which this island rests, and if anything happens to it it will be a barren wasteland.

I think that is why we are all here.

Apart from our special concern for the taxpayer in the area, which every politician says and agrees to, preservation of that water supply is absolutely essential for the survival of every human being on this island and that is what it is all about.

Mr. HANSLER. That is right.

Mr. AMBRO. Now, when you get a whole bunch of engineers coming up here and environmentalists, economists, auditors, conflicting and everybody has to sort out and determine on balance what is best, the bottom line is what is indeed best to preserve that dwindling polluting natural resource.

So, anyway, the hour is quite late. Everybody has been very patient.

It will take a while, even after the 2 weeks that the Chairman has permitted for testimony from any and every quarter, for this to be reviewed and for investigators to come back up here as a result of the kinds of testimony we heard today and put together an interim file report for action in terms of funding, tightening up loopholes in the legislation with respect to the Federal agencies, and determining whether or not we can provide some relief to the taxpayer, on the one hand, and assure the preservation of those resources, on the other.

Mr. HANSLER. I only have one last point.

You opened by saying this is not a prosecutorial hearing.

I hoped it would not be an accusatory hearing. I do not think it has been.

I think it has been very much informative and has gathered information.

Some of these difficult issues on recharge—when and where and how—I think we are going to get these answers under the 208 process from P.L. 92–500 and that is short term. That is 2 years.

I think we can do some things in the interim, as we have done with the outfall.

Mr. AMBRO. Let me ask you one question since you brought that up again.

Why does it take 3 years to evaluate?

Mr. HANSLER. On the 208?

Mr. AMBRO. Yes.

Mr. HANSLER. Because it is a land use decisionmaking process as well as it is a water quality management process.

I do not want to be the dictator and say where we are going to grow, where you are going to have the green acres, how you are going to put the red and green blocks in zoning.

That is a local decision and every one of these taxpayers ought to be involved in that 208 process. It is their resource.

Mr. AMBRO. No. No.

I am talking about the time of construction of the Cedar Creek plant, which is 2 years.

We were told the time of evaluation is 3 years.

Are you talking about evaluation from the point of view of land use decisions, or are you talking about evaluation from the point of view of technology?

Mr. HANSLER. I am talking about the evaluation of 208 land use decisions.

Insofar as technology, I think we are going to have that Cedar Creek thing proven well within the 5-year period.

Our virus and organic studies, insofar as what goes down in the aquifer, will be completed within the next 2 years.

The plant will be completed within the next 2½ years.

Mr. AMBRO. Do you have any input with respect to the water management study that has been in part funded?

Mr. HANSLER. The 208 study?

Mr. AMBRO. The water management study for the region.

Mr. HANSLER. Yes.

It is the water quality management study.

We gave the grant.

Mr. AMBRO. How much?

Mr. HANSLER. One hundred percent grant.

Mr. AMBRO. About $1.5 million?

Mr. MOLINERI. $5 million.

Mr. HANSLER. $5 million.

Mr. AMBRO. $5 million.

When is that going to be completed?

Mr. HANSLER. That should be completed within 18 months.

The USGS, NOAA, the environmentalists, the developers, everyone has a stake in the final recommendations made as to what they are going to do on Long Island.

Mr. AMBRO. Mr. Hansler, I know that.

I was a supervisor of the county that devised this cockamamy plan that they have now, because we do not have a water management study and because that consortium said you cannot develop any kind of planning without that ingredient.

So, I know all about that.

I know all about the stakes in it.

I just want to know about the time the report would be finished.

You said 18 months?

Mr. HANSLER. It should be 18 months.

Mr. AMBRO. Then you say the time of completion of the Cedar Creek plant would be 2 years.

But, then you say that the time of evaluation will be 3 years beyond that.

I still do not understand that.

Mr. HANSLER. OK.

Mr. AMBRO. How long will it take to evaluate the technology?

Mr. HANSLER. They will evaluate the technology over 3 years, but after 6 months of operating the plant they might say, hey, guys, it works.

We can go someplace else.

What they are going to say we do not know for sure. We may have to go another year, 2 years, 3 years.

In the meantime, we have concurrent studies on viruses and organics in your aquifer.

Mr. AMBRO. All right.

Mr. HANSLER. We did not think we would be out of the ocean by 1981, but we probably will.

Mr. AMBRO. I did not think we would be out of here by 6:30.

I do appreciate you coming.

I know that this kind of repartee is interesting. It only touches on a few of the points that were made verbally by all of those who preceded you.

Full rebuttal or comment or augmentation does not come in these kinds of encounters.

It comes in all of the documentation you provide after you read the record.

So does the staff evaluation of what went on here and approaches we will take, none of which I can determine at the moment.

But, I do indeed thank you for your patience.

I hope it was not too accusatory.

I thank everyone else for coming.

I appreciate your courtesy. This has been one of the finest public hearings I have ever chaired.

[Applause.]

[Whereupon, at 6 p.m., the Committee on Public Works and Transportation, Subcommittee on Investigations and Review, adjourned.]

[The following were received for the record:]

STATEMENT OF EDMUND G. CARROLL, DEMOCRATIC CANDIDATE, SIXTH ASSEMBLY DISTRICT, SUFFOLK COUNTY, N.Y.

I have one piece of information to offer for your consideration. It is my hope that this, when added to all of the other information you have compiled, will prove that certain legal aspects attendent to the southwest sewer district project have not been complied with.

On September 3rd 1976, one of the members of my staff requested a copy of the order from the comptroller of the State of New York approving the increase in costs in the southwest sewer district project. He also requested a copy of the petition submitted by Suffolk County to the State comptroller requesting this increase.

This request was made of Mr. Henry D. Classen, comptroller, Department of Audit and Control, Suffolk County. I have attached a copy of the answer we received from Mr. Classen. Mr. Classen referred the writer to Mr. Arthur Imholz, deputy commissioner of environmental control for this information.

The law of the State of New York dealing with the construction of projects of this type demands that a copy of these two records I mentioned be filed to effect such projects legally.

The answer received from Mr. Classen does not substantiate that this was done. Public records of this type should be filed at the department of audit and control in the county wherein the project is contemplated, and should be available for public scrutiny.

COUNTY OF SUFFOLK,
DEPARTMENT OF AUDIT AND CONTROL,
September 16, 1976.

Mr. GERARD ARTHUS,
Brentwood, N.Y.

DEAR MR. ARTHUS: In response to your request for a copy of an order from the Comptroller of the State of New York approving the increase in costs in the Southwest Sewer District and also a copy of the petition submitted by Suffolk County to the State Comptroller requesting this increase, this is to inform you that for this information you should contact the Suffolk County Department of Environmental Control—Mr. Arthur Imholz, Deputy Commissioner of Environmental Control—1324 Motor Parkway, Hauppauge, NY 11787—Telephone 234-2622.

Very truly yours,

HENRY D. CLAUSSEN, *Comptroller.*

STATEMENT OF SUFFOLK COUNTY LEGISLATOR LOUIS T. HOWARD

Since the voters of the Southwest Sewer District approved the sewering project in 1969, the Suffolk County Legislature has assumed the posture of overseer of one of the largest public works programs in the country. We have had to address ourselves to many and complex decisions, involving escalated costs in 1975 and recently, to a realistic review of the engineering, administrative and construction aspects of the sewering program.

In spite of the unpopularity of such decisions, it is important to note that they were formed after careful evaluation of informational materials, and made in the best interest of the residents of Suffolk County.

Due to the many investigations that were prompted this year, I appear before you a better informed and wiser legislator—BUT STILL AN ADVOCATE OF SEWERING. Throughout that learning process and via natural observations, one can only be made more cognizant of the imminent need to preserve our lakes, streams, bays, and shellfish, but more importantly, our drinking water. In studying the topographic features of the island, and the environmental impact of hydrologic studies, the only forseeable solution lies in recharge.

To this end, I pursue enlightenment upon as many feasible areas of recharge as possible. Recently reviewed is material on the Lake Tahoe project, Sonozone Tertiary Treatment, and as recent as this past Tuesday, an on-site observation of the Lowlands Recharge System (meadow-marsh-pond program) at Brookhaven Laboratory. (picture exhibit) I will continue to pursue and review other innovative systems and methodology in anticipation of compliance to future mandates related to sewering.

Recharge is not an alternative to sewering—it is but one solution toward the preservation of Long Island's water supply.

I make no pretention to knowledge of or expertise in the technical aspects of sewer design and installation. I am neither engineer nor administrator. My legislative responsibility obligates me to the selection of qualified individuals and the extraction of their quality performance in behalf of the public interest. The design mandates of the sewer project were precipitated at higher governmental levels but emerge as a prime source of dilemma. Perhaps this committee could

explore the mechanics and relationship of methods to insure a closer liaison with officials of Suffolk County regarding aid distribution and engineering and construction review.

An additional legislative commitment is to pursue any and all avenues of assistance that will alleviate the financial burden of those obligated to the completion of the Southwest Sewer District. And a major crippling factor of the sewering program is financial. Aside from the escalation in cost, the percentage of interest fostered on Suffolk County for sewer bonding has doubled in the past three years.

I stand before you in humility, pleading on behalf of my constituents to ellicit federal commitment to their survival. Poor, but proud, these individuals struggle and make every effort to meet their obligation. I call upon federal and state agencies to fully allocate the appropriations they legislate. If federal assistance is available to other national municipalities at 4½% and 5% interest, why not to Suffolk County also?

A recent prompting for the faith and credit of the federal government to guarantee sewer bonding has resulted in the passage of such a measure in the United States Senate. I urge your support for that bill's passage in the appropriate session of the House.

I urge increased monitoring and periodic review by the House Public Works Committee in an overview of the Southwest Sewer District.

An opportunity is at hand and the security and survival of the taxpayers of the Southwest Sewer District is worth a coordinated effort.

COUNTY OF SUFFOLK, N.Y.,
COUNTY LEGISLATURE,
October 6, 1976.

Hon. JIM WRIGHT,
Chairman, Subcommittee on Investigations and Review of the Committee on Public Works and Transportation, Washington, D.C.

DEAR CONGRESSMAN WRIGHT, CONGRESSMAN AMBRO, AND ALL COMMITTEE MEMBERS: Now that I've had some time to reflect on your important investigative Subcommittee hearing which took place in Suffolk County on September 24, 1976, I'd like to offer some closing observations for the inclusion in the official record.

After listening to all the witnesses at the hearing it is clear that each represented a "vested interest", but only one of these "special interests", represented by a number of speakers, can fairly qualify for the understanding and sympathy of this Committee; and that "special interest" is the residents and taxpayers of the Southwest Sewer District.

On the other side Commissioner Flynn, County Executive Klein, New York State Department of Environmental Conservation, the Environmental Protection Agency, the project engineers and the contractors all seem much concerned about protecting their involvement and avoiding criticism of this misguided project. But, it isn't these special interests (none of whom live within the Southwest Sewer District) who will either pay for or suffer the environmental damage generated by this project. No, it is we, the "special interest" residents and taxpayers of the District who will suffer the consequences.

Enclosed are approximately 300 sheets filled with about 4000 signatures collected by a handful of volunteers in a few days. I would like to submit, for the record, these petitions which call for—

(1) a moratorium on all new sewer district contracts,
(2) a full, independent evaluation of the Southwest Sewer project, and,
(3) a renegotiation of all existing Southwest Sewer contracts.

It is these petition-signers, only a small fraction of the dissatisfied residents of the area, who must prevail for the sake of these communities and the credibility of our government.

As stated by both New York State DEC and the EPA only 15% of the "eligible" work is complete. There is time now to stop and reconsider this entire project; its scope, design and impact. Because of the callous attitudes displayed by local representatives responsible for the Southwest Sewer project we desperately look to you the Chairman and members of the Public Works Committee, to offer the leadership necessary to provide needed changes. You will not only be helping the residents of the area, but also saving taxpayers throughout the nation unnecessary, wasteful expense; and for the future setting a standard that will encourage

properly conceived, designed and implemented waste water projects all over our great land.

Finally, once the new Congress convenes I look forward to coming to Washington to meet personally with each of you and answer your questions. Together I am certain we can find solutions.

Sincerely,

RICHARD G. LAMBERT,
County Legislator.

STATEMENT OF EDWARD F. MOORE, JR., STUDENT, STATE UNIVERSITY OF NEW YORK, FARMINGDALE

THE LAW AND THE WORD

What is it that I am trying to communicate to the American People and the World? I believe those good forces above already know the Truth. Why is it that the men of the present cannot see the man of the future? Why do we crucify the Good Truth of life? Can you not see what I am talking about? Whom I am talking about? I am talking to you the people in this present world about the True Man.

To Socrates, as he said at his trial, what the Athenians seemed to need most in these years of bitter discomfiture was not a siren to flatter and soothe them with sham promises of a speedy return of prosperity and grandeur, but a gadfly to sting them to unflinching Self Examination, to see where in the past they had been wrong-headed and mistaken and how with patience and hard thinking, they might yet build better lives for themselves and for their city.

President Richard M. Nixon was the American gadfly. Yet President Richard M. Nixon is not a social bee but an Individual American. Yes he was confident in the Justice of his cause. Yes, he believed that what he did was right.

All he asked of the American People was that they listen to the Truth of his words, and give heed to them. Let the speaker speak truly, and the judge decide justly.

A man who is good for anything, ought not to calculate the chance of living or dying: He ought only to consider whether in doing anything he is doing right or wrong—act the part of a good man or a bad man. The Presidency should come first and Politics second. To the maximum extent possible therefore, President Richard M. Nixon sought to delegate campaign operations, and to remove the day-to-day campaign decisions from the President's office and the White House. He also severely limited the number of his campaign appearances. Yes, The President had to choose his role, but let us Understand that we in the free world have to live or die by the proposition that the people have a right to choose.

Being the Commander in Chief of all the armed forces thus President Richard M. Nixon, with faith in what he believed was right took upon his shoulders the responsibility of defending the lives of American Men.

First, as you know this war, while it was undeclared, was there when President Richard M. Nixon became President of The United States, I am stating the fact that there were 549,000 Americans in Vietnam under attack when President Richard M. Nixon became President.

During the Korean War General MacArthur believed that restrictions should be lifted against attack on basis in the Manchurian "sanctuary" and urged that the Chinese coast be Blockaded.

The President of The United States has the Constitutional Right—not only the right but the responsibility—to use his powers to protect American Forces when they are engaged in military actions. The Legal Justification is the one I have given, and that is the right of the President of the United States under the Constitution to protect the lives of American men. You may recall, of course, that Korea was also an undeclared war and then we justified it on the basis of a U.N. action.

Why didn't the President go to the Senate, for example, and the House, and ask for their approval on Cammand Decisions: As far as the President was concerned, He had to think of what was right, what was necessary, what would save American Men, and the element of surprise was important. He did not think it was wise to give the enemy the advance notice, the strategic warning, which would have taken away the surprise and would have cost us lives.

There are times, when the Commander in Chief the President of the United States, will have to act quickly. True Courage is when a Man takes a stand against Public Opinion and does what he believes is right.

Our forefathers understanding the maxim of the power always expressing itself in terms of the instrument through which it works, decided the Executive Power shall be vested in a President of the United States of America.

The Constitution Of The United States is the law, The President is the personality through which it works. Limit the power of the PRESIDENT; Limit the personal element of free will and you limit action.

The President will set the law working in the right direction. It must be a word of confidence in its own power. The President is the sprirt of the Constitution: the spirit of the law. It is time we the people respect the constitution and her spirit.

President Richard M. Nixon was a true soldier, a man of duty, man of honor, a man of country. He believed in the spirit of the people. Did the people believe in the spirit of the man? He believed in his Nation! Did the Nation believe in him? He walked in the light of truth and darkness tryed to put it out. The truth of an old soldier does not die and does not fade away.

God Bless America. God Bless The People. God Bless Nixon.

FACT SHEET OF THE STRONG'S NECK CIVIC ASSOCIATION POLLUTION COMMITTEE, SETAUKET, N.Y.

Re opposition to Suffolk County's massive regional sewering program. Southwest District and proposed regional Suffolk County Sewer District 8; including all or parts of Old Field, Port Jefferson, Port Jefferson Station-Terryville, Poquott, Belle Terre, Stony Brook, the Setaukets and Strong's Neck

Estimated cost: Hulse and Comsewogue Rds. Site, East Setauket, Proposed Nucleus of Suffolk Co. Regional Sewer Dist. 8—$27,400,000 including est. $4,100,000 Long Island Sound outfall pipe. (Cost to the taxpayers cannot be determined at this time.) Dry sewer lines installed—Harbor View—opposite Main St. School, Main St., Setauket.

Estimated cost: Alternate proposal upgrading Port Jefferson Sewage Plant, $27,400,000. (Cost to the taxpayers cannot be determined at this time.)

Estimated mandatory nitrate removal when feasible for Recharge would add 50% to Capital and Operating Cost of Treatment Plant. (Cost to the Taxpayers cannot be determined at this time.)

Suffolk County's highly controversial southwest sewer district now under construction

1969 voters approved bond issue	$291, 750, 000
1975 Suffolk County legislature increased bonding	349, 000, 000
Estimated 40-year construction bond Interest	495, 750, 000
Total estimated cost without recharge	1, 136, 500, 000
Estimated groundwater recharge cost	150, 000, 000
Estimated cost ocean outfall pipe	70, 000, 000

With rapidly developing Federal, State and Local fiscal problems, there can be no positive Funding Guarantee.

Long Island's unique water supply.—Nassau and Suffolk Counties depend on their Ground-water Reservoir as a sole source of water supply. The Groundwater Reservoir is replenished by average yearly precipitation—44.1 inches, Strong's Neck Weather Station . . . founded 1887. Dought of the 60's—almost one year's precipitation lost—not included. The precipitation percolates into the Goundwater, purified by one of Long Island's greatest assets—its Sand and Gravel Filtering System—one of the finest in the world. The System is visible in our sand and gravel mines—also the Bluffs of the North Shore. Open space necessary for percolation is lost due to population increases accompanied by massive development, concrete and blacktop, the introduction of sewage outfall pipes to surrounding salt water and excessive pumping which substantially decrease the Groundwater Reservoir . . . Example—Kings County is almost completely sewered and developed. Rain water and sewage are collected and disposed of through outfall pipes. The area water table was lowered to 35′ below sea level. Naturally salt water intruded the Goundwater Reservoir. Disaster was averted by importing public water from upstate. Latest readings show the water table is rising—three explanations—minimal pumpage, recycling air conditioning cooling water and leaky sewer lines whose systems now need billions for rehabilitation.

Massive regional sewering with bay and ocean outfall without Groundwater Recharge caused groundwater levels to decrease substantially causing salt water intrusion . . . Kings, Queens and Southwest Nassau. Ninety-five percent of Long Island's surface waters . . . streams, lakes, ponds and shoreline seepages, springs are directly associated with our Groundwater and decline proportionately. As the Groundwater levels decline, the shoreward movement of fresh water decline with significant disruption of the very productive brackish estuarine North and South Shore Environments.

1. Temporary State Commission of the Water Supply Needs of Southeastern New York . . . Nassau's critical water deficit . . . importation of water by 1985 . . . Flood skimming Hudson River, contaminated by industrial, municipal and agricultural wastes, at Hyde Park with purification and transmission capabilities to Nassau.

There is no County division of our Groundwater Reservoir. Nassau County's deficit will directly lower Suffolk County's Groundwater supply.

2. Taxpayers have spent millions to acquire recreational areas and have unknowingly spent billions on massive regional sewering which without Groundwater Recharge will eventually destroy these areas.

3. Commercial hard shell clamming more than $1,000,000 industry supplying over 60% of the nation's consumption . . . adversely affected.

It has been estimated Proposed Suffolk Co. Sewer Dist. 8 with Long Island Sound outfall will lower the North Shore water table 7′ . . . The Southwest Sewer Dist. with Ocean outfall will lower the South Shore water table 10′.

1. Hydrologists dispute this calculation as being too low.

Outfall pipes.—It is an undisputed fact Long Island Sound, Bay and Ocean outfall introduce contamination to our fragile mobile marine environment.

1. Nassau's newest Sewage Complex 120 mgd . . . million gallons per day . . . Wantagh-Seaford with $54,281,000 seven mile outfall pipe . . . longest in the U.S. . . . leaked 9.5 mgd into South Oyster Bay for 19 months and is now leaking 1,400 feet south of Jones Beach.

The Ocean outfall 2½ miles south of Gilgo, Jones Beach, has yet to withstand the ravages of a tropical hurricane and severe winter storms.

2. Proposed estimated $70,000,000 Southwest Bergen Point 30 mgd Ocean outfall, just FIVE miles east of the Wantagh-Seaford Ocean outfall, 3 miles west of Fire Island Inlet, via Great South Bay, will discharge 3 miles south of Cedar Island.

3. Proposed Suffolk Co. Sewer Dist. 8 initial 5 mgd estimated $4,100,000 Long Island South outfall pipe will discharge 1 mile west of the mouth of Port Jefferson Harbor.

Since the waters of Long Island Sound move in a sloshing action from west to east, the proposed outfall will be carried to the finest beaches of the North Shore.

Contaminants in our groundwater reservoir.—Many contaminants enter our water supply . . . 135 known pollutants. Significant pollution from road run-off, contamination from leaky sewer pipes, and from fertilizers and pesticides . . . farms, gardens, well-manicured suburban lawns and golf courses. Significant degradation also by Sanitary Land Fill . . . garbage dumps. Suffolk County's regulations permit installation of cesspool systems only 2′ above Groundwater levels. Our Groundwater will continue to degrade despite massive regional sewering with environmentally destructive outfall to Ocean and Long Island Sound.

1. Several systems in Nassau Co. built post World War II need millions for rehabilitation.

2. Three mile, 13 year old, connecting pipeline between the State University at Stony Brook and Port Jefferson Sewage Plant ruptured 9 times in the last 3 years. Last rupture contaminating our Bays and Harbors closed 735 acres to shellfishing.

3. Southwest Sewer Dist. area with high Groundwater levels should be served by a series of small modern, most advanced properly designed sewage plants with simple Groundwater Recharge north of Sunrise Highway . . . carefully monitored by Suffolk County Department of Environmental Control. (SCDEC)

A. Design and equipment can be standardized and computerized. Standardization reduces engineering costs.

B. Collection piping cheaper, less complex and smaller. Waste materials travel shorter distances. The costs of transmission from a peripheral waste source to a regional sewage treatment plant are enormous.

C. Proper site planning with adequate buffer zones and landscaping must be implemented.

D. Nitrates can be removed in the small sewage complex. Required Jan. 1974 SCDEC. Nitrate removal is not now feasible in Regional sewage plants. When feasible, mandatory nitrate removal would add an estimated 50% to the capital and operating cost of the sewage plant. Final cost to the Taxpayers of the Southwest Dist. cannot be determined. The small sewage complex with nitrate removal and simple Groundwater Recharge is a complete system . . . final cost to the Taxpayers can be determined.

E. Costly estimated $70,000,000 environmentally destructive Ocean outfall unnecessary.

F. Small plants can be constructed faster than one monster plant.

Sludge.—Suffolk County is now incinerating sludge. To protect our environment, the wise use of sludge is not incineration but fertilizer . . . expensive and in short supply . . . Example . . . Milorganite, Milwaukee, Wis., the conversion of sewage solids into an all organic fertilizer, manufactured since 1929. The Town of Brookhaven is turning sludge from the Manorville Landfill Site into topsoil to be used in Brookhaven Park Sites.

The simple, environmentally sound and economical solution to protect our unique groundwater reservoir water supply is not massive regional sewering with ocean and Long Island Sound outfall but the installation of small modern sewage systems with groundwater recharge in high density areas where needed . . . Example State University at Stony Brook, a high density educational community. Continue with cesspools in the remaining areas using our natural sand and gravel filtering system. We can then maintain our groundwater-surface water equilibrum Suffolk County does have a carefully monitored public water supply. When and if necessary, groundwater purification at the well head. Water purification system now in operation . . . Nassau Co., Garden City Park Water District.

Members of the Strong's Neck Civic Association Pollution Committee have prepared these fact sheets for your immediate consideration and action.

We ask the support of Suffolk County Executive John V. N. Klein, the Suffolk County legislature, County Executive John V. N. Klein's appointed Suffolk County Dept. of Environmental Control Commissioner John Flynn. The support of every voter and taxpayer of suffolk County to reverse the present and continuing degradation of our Suffolk County environment due to Suffolk County's present costly, environmentally destructive massive regional sewering program with ocean and Long Island Sound outfall.

○